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ABSTRACT

The report presents findings of a review of research on recreation and leisure education for handicapped children and youth and an analysis of policy implications. Research was assessed via facet analysis; the facets were specified as: actors, or population (handicapping condition), setting, and descriptor categories or types of actions or products--materials, model programs, interaction of leisure with education, policy issues, interagency cooperation, and funding assistance. Details of the literature search process (screening, assessing external and internal validity) are presented in a section that also includes summaries of studies on leisure skill assessment, leisure skill acquisition, community programming, leisure counseling, social skill development through leisure participation, and school-based leisure education. A state of the art paper follows with information on research and training projects promoting leisure education for handicapped students. Results of a Delphi Survey of professionals are reported regarding critical issues or gaps in the literature that were considered pertinent to facilitators of leisure education and recreation programs for handicapped persons. A final section presents recommendations for future research in recreation and leisure education for special populations. (CL)

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ED245503

FINAL REPORT

Research Integration Project:
Recreation and Leisure Education for Special Populations

submitted by

Institute for Career and Leisure Development
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EC163887

PART I

INTRODUCTION: Research in Recreation and Leisure Education for Special Populations

PURPOSE AND RATIONALE

A growing body of policy relevant research on recreation and leisure education for the handicapped has emerged in the last quarter century. This body of research has not been evaluated comprehensively with respect to technical quality, utility for policy-makers, and potential for codification and wider diffusion. This body of research is difficult to locate, evaluate and use in decision-making. Systematic and rigorous evaluations of this literature and experience are required to aid in the planning and definition of research programs concerned with handicapped children and youth and to provide a synthesized base of evaluated information for potential use by agencies at all levels of government and the private sector.

The specific purposes of this research project were to identify, retrieve, organize, evaluate and disseminate (1) policy-relevant research primarily on recreation and leisure education for handicapped children and youth and (2) research from the larger body of studies on handicapped children and youth which can be applied analogously to decisions affecting policy effectiveness, efficiency and equity.

The information provided in this report will be useful to therapeutic recreation practitioners, leisure educators, school administrators, regular and special classroom teachers and significant others who work with handicapped children and youth. Students preparing for careers in serving the handicapped should also find these results useful. Lastly, government officials at the Office of Special Education will be better prepared to judge the importance of unsolicited proposals and the formulation of more professionally relevant and necessary requests for proposals.

This investigation identified those policy instruments currently and potentially available to decision-makers. In this context, these specific issues were addressed:

- Principles and criteria for evaluating the internal validity, strengths and weaknesses, and internal consistency of individual studies.
- Principles and criteria for evaluating the external validity and consistency of results of different studies bearing on the same subject.
- Principles and criteria for judging the policy relevance of particular studies and of sets of related research bearing on given policy instruments.

This project focused on an assessment of the research literature pertaining to a number of significant areas for which personnel in recreation and leisure education for the handicapped are responsible. It assessed the actual and potential usefulness of research findings for application to practical situations by separating unproven theory, opinion, and rhetoric from valid findings of research.

Due to limitations of time and money, it was not possible to explore indepth all policy areas for which persons require supporting research findings upon which to base their decisions. For these reasons, retrieval and evaluation efforts concentrated principally on those areas most directly bearing on the intent of PL 94-142, The Education for All Handicapped Children Act of 1975. Specifically, the rules and regulations for PL 94-142 state that recreation includes:

1. assessment of leisure function
2. therapeutic recreation services
3. recreation programs in schools and community agencies
4. leisure education

The final organization and analysis/synthesis of the research was dictated somewhat by the nature and scope of available research bearing on that subject. In any event, attention was given to the following categories:

- available materials
- model programs
- interaction of leisure with education
- policy issues
- interagency coordination
- funding assistance

In the final analysis, a form of facet analysis was employed to specify the boundaries and structure of research problems within the sphere of investigation.

Facets are categories. For the model that was employed by this project, they were specified as:

1. the actors or population (handicapping conditions);

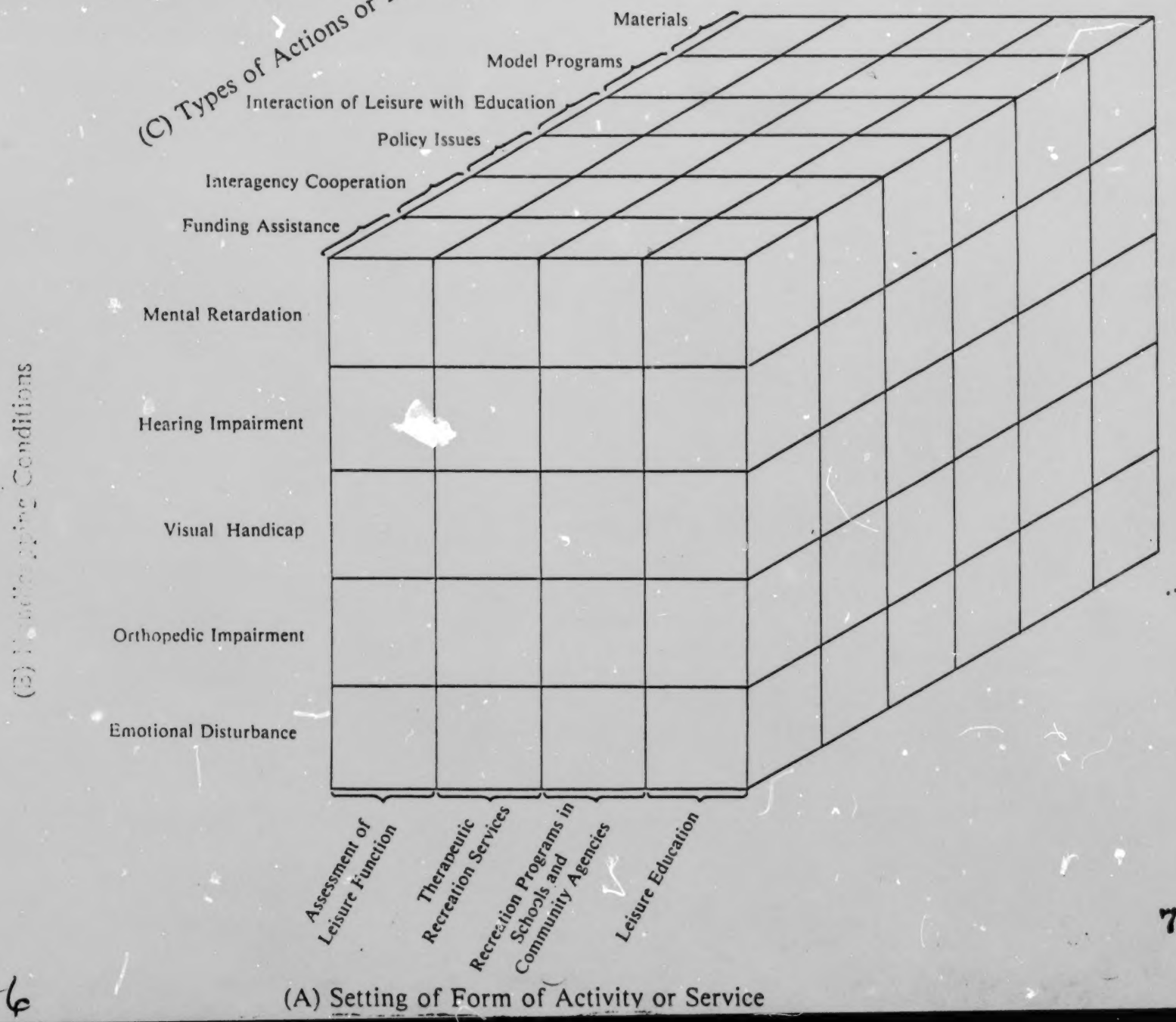
2. the setting or form of activity or service (taken from the four components described in PL 94-142 as being a part of recreation--assessment of leisure function; therapeutic recreation services; recreation programs in schools and community agencies; leisure education);

3. the descriptor categories or types of actions or products (materials, model programs, interaction of leisure with education, policy issues, interagency cooperation, and funding assistance).

Figure 1 illustrates the general framework of facet analysis that was employed in this investigation.

This project concentrated heavily upon an analysis of secondary sources rather than upon primary research. For the most part, the literature screening was delineated to research, formal studies and documented, authoritative writings; statements of philosophy or polemics were generally excluded. However, certain exceptions were made, e.g., if a particular work in the literature was frequently cited or used as the

FIGURE 1: Facet Analysis/Synthesis of Research in Recreation and Leisure Education.



basis for action or decision-making. In these instances, such documents were included with appropriate comments provided.

Rationale

It has only been within the last twenty-five years that many opportunities have existed for handicapped persons to engage in recreation and leisure activities. Individuals who were able to find opportunities were generally those who had the capacity to generate opportunities for themselves and to overcome the many barriers and obstacles placed before them. Yet as early as 1918, the Commission on the Reorganization of Secondary School Education (National Education Association) issued the Cardinal Principles of Secondary Education, which included "education for the worthy use of leisure" as an objective of the schooling process. In 1946, a report prepared for the National Education Association and entitled, Policies for Education in American Democracy, re-examined and reaffirmed the cardinal principles, especially the use of leisure time. Despite these emphases on the subjects of recreation and leisure, it was not until the early 1960's that the federal government began to recognize the value of these aspects in the lives of handicapped persons. The first federal agency to recognize the need for education for the handicapped was the Division of Vocational Rehabilitation. In the early 1960's, the Vocational Rehabilitation Act identified recreation and leisure for handicapped persons as a specific target for training funds. In 1967, the provision entitled "Research and Training in Physical Education and Recreation for Mentally Retarded and Other Handicapped Children" was included in Title V of Public Law 90-170. This section became the single largest funding source specifically related to physical education and recreation for handicapped children and youth. This overall statute was again amended in 1975 in the form of Public Law 94-142.

The language of Public Law 94-142, the Education for All Handicapped Children's Act of 1975 commits the Federal government to the support of recreation and leisure education for all handicapped children, ages three through twenty-one. Special Education has been defined in the legislation as:

> . . . specially designed instruction, at no cost to parents or guardians, to meet the unique needs of the handicapped including classroom instruction, instruction in physical education, home instruction, and instruction in hospitals and institutions.

The Act further defines related services as:

> . . . transportation, and such developmental, corrective, and other supportive services (including occupational therapy, recreation, medical, and counseling services) . . .

The Congress has made its intent clear--physical education, recreation (which is defined to include leisure) and related activities are to be

integral parts of educational programs for handicapped children regardless of the type or severity of the condition.

Further, Public Law 88-29 approved by Congress in 1963 affirmed policy that all Americans should be assured of adequate outdoor recreation resources. There has been no question that the words, "all Americans," referred to handicapped persons and their rights to outdoor recreation opportunities. Further, litigation over the past ten years has included recreation and leisure services as part of the "right to treatment" decisions. Needless to say, there is a new and developing interest in the field of leisure and recreation for the handicapped. Though less than twenty-five years old, legislation has mandated, and practitioners have begun to provide services for the handicapped population after receiving specialized pre-service and inservice training. As a result, there has been an influx of research on the impact of particular recreational and leisure activities on the handicapped children and adult population. The Office of Special Education has funded research for the development of curriculum models, assessment techniques, educational approaches that are new and innovative in these fields.

In order to make changes in the lives of handicapped individuals in accordance with their leisure needs, purposeful intervention must occur. The consequences of change, the impact upon an individual, group, situation, institution, concept, or process—can be negative, neutral, or positive. Professionals and practitioners in the field have used many approaches in undertaking planned intervention to achieve change. However, it is safe to assume that the better the diagnosis of the situation, identification of the type and extent of the change sought, and development of appropriate strategies, the better the outcome.

One of the ways to approach useful intervention is through research. Special educators, therapeutic recreators, and researchers have played a substantial role in improving the leisure lifestyle of handicapped populations by adequately defining problems, formulating appropriate hypotheses, conceiving valid and reliable research designs, and applying the resultant data to bring about the type of change required for a more effective service delivery system.

Information Resources and Research Techniques

To be of value, research findings must be applied to programming and operational settings to initiate change. Researchers must be aware of the avenues for dissemination of results, and practitioners must be aware of the systems which include the type of research information they require in their operations. Many information systems now exist which can be utilized by both researchers and practitioners.

Research techniques should also be shared and refined to insure the validity and reliability of instruments.

GOALS AND OBJECTIVES

The overall goal of this research integration report was to provide the field with an accurate assessment of the current state-of-the-art of research on the important components of recreation and leisure education for the handicapped. Secondly, it was a goal to identify gaps in the research in the field and provide recommendations for closing those gaps through directed empirical investigation which will expand the body of knowledge and subsequently improve service delivery to handicapped children and youth.

The specific objectives of the report are as follows:

1.0 To conduct a systematic search and review of the research literature in the fields of recreation and leisure education.

2.0 To classify/codify the above research by generic topics of concern.

3.0 To conduct a detailed analysis/synthesis of the above body of literature to determine internal and external validity of studies.

4.0 To prepare a draft state-of-the-art paper.

5.0 To convene a panel to review the state-of-the-art and identify critical gaps/issues in the literature.

6.0 To conduct Delphi-surveys of professionals and practitioners in the field to formulate rating/ranking of research issues/needs.

7.0 To convene a "writers workshop" of select experts to review Delphi results and generate recommendations for future research.

PART II

Literature Search of Empirically Based Research In Recreation and Leisure Education for Special Populations

PROCEDURES/METHODS

Below is a reiteration of the principal objectives of this research integration report and a narrative of the major procedures that were undertaken.

Conduct a Search and Review of the Literature In the Fields of Leisure and Recreation

Based upon the model discussed earlier, project staff conducted a search of the empirically based research in the areas of leisure education and recreation programs, leisure counseling, educational assessment in the areas of leisure and recreation, and interagency coordination. Within each of these topical areas, project staff looked for evidence of research-based materials, model programs, and discussion or position papers which relate to policy issues in the targeted areas.

In addition to the search of the literature, a review of the previous and currently funded projects related to recreation and leisure in the files of the Office of Special Education was necessary. The staff at the Institute for Career and Leisure Development, in their work over the last five years, has received funding for the development of a leisure curriculum for the handicapped and also for inservice training in the field of leisure education under the title Special Education for Leisure Fulfillment (Project SELF). Consequently, the staff was familiar with much of the work in the field of recreation and leisure which has been conducted and which is currently under funding. Examples of these include the System's Model for Developing Leisure Education Programs for Handicapped Children and Youth, the task analysis work completed by Berryman, Nesbitt's model program in special therapeutic recreation, the Leisure Diagnostic Battery, the document, Career Education in Leisure Occupations developed by the National Recreation and Park Association, Wehman and Schleien's Leisure Skills Curriculum for Developmentally Disabled Persons, and the leisure skills program for the severely handicapped at the University of Hawaii.

Finally, in completing the search of the literature that is policy relevant and utilitarian, doctoral dissertations from colleges and universities that have graduate programs in the fields of therapeutic recreation or emphasis in special education on leisure for the handicapped were accessed. The State Departments in Special Education or Physical Education or Physical Education and Recreation also proved beneficial in providing information on model programs, relevant research, or other activities currently happening in their states.

INITIAL SCREENING PROCESS

A large number of research works which were uncovered in the search process had little or no policy utility to project focus. Consequently,

early elimination of these items facilitated the indepth review of pertinent literature. The following initial screening procedures were employed to eliminate the research of little value to the study.

An index card was completed for each item as it was identified, including such data as (a) standard bibliographic information (author, title, publisher, date, pages); (b) a notation of the policy category area; (c) a one-sentence description of content; and (d) an initial value judgment of utility based upon the abstract or actual document content—"little," "some," or "great" utility. For those appropriate items cited in bibliographies (for which no abstract was available), the value judgment was made on the basis of the title alone; the studies were then retrieved for further screening.

Documents which, upon the initial review, were deemed to have potential policy utility were retrieved and more carefully scrutinized according to points on a "Screening Research Review Form," an instrument developed by the project staff (see Form 1). Those studies which were rated as having "some" or "great" policy utility as a result of this procedure were set aside for a more intense evaluation for internal and external validity.

POLICY UTILITY DETERMINATION

As described above, a "Screening Research Review Form" was developed and used as the instrument to determine the policy utility of studies reviewed. The criteria basis for determining the policy utility, developed by the project team was:

1. Was the study under review timely? That is, was it relatively old with regard to its usefulness or was it a relevant study now and/or for the immediate future?

2. Did the study have sufficient scope to have generalizability to a larger population of education and recreation systems, operations and services? Were the conditions or circumstances surrounding the study unique in their contribution to the "success" or "failure" of the study so as to prohibit the results from occurring in other agency systems, operations or services (e.g., political influence, climatic conditions, geographic characteristics, etc.)?

3. Did the cost-effectiveness of the results serve as a prohibitive condition to the policy being initiated in a larger population of agencies?

4. Were the resultant financial implications (for labor, facilities, materials, etc.) reported reasonable enough to have generalizability to most systems and operations?

5. Did the study have practicality? That is, was it too esoteric by the nature of the group its initiation would reach, or did it have potential for serving a broad base of the population?

6. Was there sufficient meaningfulness to the study to warrant its results being put into practice?

METHODOLOGY FOR ASSESSING INTERNAL VALIDITY

Six principles or criteria were used to assess the internal validity of each study reviewed:

1. Were the findings backed up by data in the study? Was an hypothesis stated and properly tested?

2. Was the report self-consistent with respect to various assumptions and definitions?

3. If a sample was used to make general statements, was the sample of adequate size and design?

4. If models were used, were the distortions introduced by simplifications so great as to invalidate the results for use in practice? Were the models used mathematically and theoretically sound? Were their inputs and outputs understandable and relevant to policy makers?

5. Did the study take into account the practicalities of the real world and not just theory?

6. How might it impact the effectiveness, efficiency, and equity of operations?

These criteria appeared in a second form ("Research Review Report") devised by the project staff to evaluate studies (see Form 2). A more extensive list of questions was developed, aimed at determining the internal validity of a study; most of these were raised in VanDalen and Meyer's chapter on evaluation in Understanding Educational Research.

METHODOLOGY FOR ASSESSING EXTERNAL VALIDITY

Criteria employed to determine the external validity of a group of studies dealing with a similar policy area included:

1. Were the various studies of a given category of study consistent in findings?

2. Were differences explainable by differences in assumption, approaches, or errors?

3. Did sets of studies together provide a large enough sample to make findings more generalizable?

4. What conclusions can be drawn concerning the impact on effectiveness, efficiency, and equity of operations?

PROTOTYPE REVIEW FORM

(Prescreening)

Reviewer: _____ Date: _____

Item Title: _____

Author: _____ Publication Date: _____

Item Source/Location: _____

Subject Area: ( ) Assessment of Leisure Function
( ) Therapeutic Recreation Services
( ) Recreation Programs in Schools and Community Agencies
( ) Leisure Education

Content Area: ( ) Funding Assistance
( ) Interagency Cooperation
( ) Policy Issues
( ) Interaction of Leisure with Education
( ) Model Programs
( ) Materials

Item Description:

Rate this item's effectiveness in meeting the following criteria, using the scale 5 (high) to 1 (low) to indicate the degree of adherence to each criterion measure.

	High				Low	Comments
1. Relevance	5	4	3	2	1	
2. Technical quality	5	4	3	2	1	
3. Clarity	5	4	3	2	1	
4. Comprehensiveness	5	4	3	2	1	
5. Usability	5	4	3	2	1	
6. Adaptability	5	4	3	2	1	
7. Feasibility	5	4	3	2	1	
8. Content level	5	4	3	2	1	
9. Content validation	5	4	3	2	1	
10. Empirically based	5	4	3	2	1	

Recommendation for inclusion in bibliography:

( ) YES ( ) NO Comments

FORM 1

Screening Research Review Form

Reviewer: _____ Date: _____

Subject Area: _____

I. BIBLIOGRAPHIC INFORMATION

A. Author(s) _____

B. Title _____

C. Publisher (City and Firm) _____

D. Date _____ E. Page Numbers _____

F. Form (mimeo, book, journal, article etc.) _____

G. Availability (where obtained) _____

H. Source (textbook, journal, report, etc.) _____

I. Basis for Literature: (Check one)

1 ___Research
2 ___Practitioner's writing
3 ___Polemics
4 ___Textbooks
5 ___Other

II. POLICY UTILITY—INITIAL RATING

A. Timeliness: Study results are: (Check one)

1 ___Relevant now
2 ___Relevant for the immediate future
3 ___Probably too old to be useful
4 ___Probably too futuristic to be useful

B. Generalizability: The study is: (Check one)

1 ___Of sufficient scope to have relevance to other recreation and park operations, systems, and services.

2 ___Affected by unique factors and circumstances (political, climatic, geographic, etc.) which may prohibit the results (successful or unsuccessful) from occurring in other agency systems, operations, and services.

C. Financial implications: The financial implications for a municipality adopting study results are: (Check one)

1 ___Reasonable enough to suggest generalizability to many municipalities.

2 ___Reasonable enough to suggest generalizability to some municipalities.

3 ___Not reasonable enough to suggest generalizability.

D. Practicality: The study results: (Check one)

1 ___Have potential for serving a broad base of the population.

2 ___Are to esoteric or limited regarding their impact.

E. Importance: The study results are. (Check one)

1 ___Of sufficient importance to warrant consideration and application.

2 ___Not of sufficient importance to warrant application.

F. Are there any unanswered questions or particularly perplexing points that would suggest the need for additional reviews before the final decision is made regarding the policy utility of this study? Yes___ No___ If YES, please explain. If possible, suggest additional reviewers:

_____

_____

G. List policy issues that the research or writing would help answer:

_____

_____

_____

H. Overall Rating: (Check one)

1 ___Great Policy Relevance

2 ___Some Policy Relevance

3 ___Little or No Policy Relevance

III. ANNOTATED BIBLIOGRAPHY

If the research or writing has "great" or "some" policy relevance, write a brief abstract to include:

1) stated purpose;
2) principal questions examined;
3) principal research method employed;
4) major conclusions; and
5) new research issues identified.

Please restrict to 100 words.

II. POLICY UTILITY

Check appropriate blanks and provide brief narrative explanation if necessary for clarification.

A. Timeliness: The study is

___a. relevant now

___b. relevant for the immediate future.

___c. too old to be useful.

B. Relevance: The study is

___a. of sufficient scope to have relevance to other recreation and park operations, systems and services.

___b. affected by unique factors and circumstances (political, climatic, geographic, etc.) which may prohibit the results (successful or unsuccessful) from occurring in other agency systems, operations and services.

Explanation (if necessary): _____

_____

_____

C. Cost and Effectiveness: The cost and effectiveness of the results:

___a. would serve as a prohibitive condition to the policy being initiated in other agencies.

___b. would not be prohibitive.

Explanation (if necessary): _____

_____

_____

D. Financial Implications: The financial implications for labor, facilities, materials, etc.:

___a. are reasonable enough to suggest generalizability to most municipal systems and operations.

___b. are not reasonable enough to suggest generalizability.

FORM 2

Research Review Report

Reviewer: _____ Date: _____

My overall recommendation for the study in question is: (Check one)

____ Has policy utility and meets criteria for validity

____ Has little merit for professional decision-making

I. BIBLIOGRAPHIC INFORMATION

A. Title _____

B. Author(s) _____

C. Publisher _____

D. Date _____ E. Length _____

F. Form of availability:

1. Book: ___ available ___ out of print
2. Article in periodical ___
3. Article in edited collection: ___ in print ___ out of print
4. Government publication (specify source) _____
   _____
5. Private organization (specify source) _____
   _____
6. University (specify source) _____
   _____
7. Manuscript from author _____
8. Prepublication form (specify form and estimated date available _____
   _____
   _____

   Explanation (if necessary) _____
   _____
   _____

E. Practicality: The study results

___a. have potential for serving a broad base of the population.

___b. are too esoteric or limited regarding their impact.

Explanation (if necessary) _____

_____

_____

F. Importance: The study results

___a. warrant consideration and application.

___b. do not warrant application.

Explanation (if necessary)_____

_____

_____

G. Are there any unanswered questions or particularly perplexing points that would suggest the need for additional reviews before the final decision is made regarding the policy utility of this study? ___Yes ___No If YES, please explain. If possible, suggest additional reviewers.

_____

_____

_____

_____

III. DESCRIPTIVE INFORMATION

A. Subject of Research_____

B. Author(s) Perspective (if discernible)

___1. Participant observer
___2. Third party researcher
___3. Third party participant
___4. Third party consultant
___5. Other (specify) _____

C. Primary Disciplinary Orientation of Research

___1. Special Education
___2. Recreation
___3. Leisure Education
___4. Rehabilitation
___5. Sociology
___6. Psychology
___7. Counseling
___8. Organizational Decision-Making
___9. Interdisciplinary (specify if possible)_____

_____

___10. Other (specify)_____

___11. Not readily identifiable_____

D. Locus of the Method Researched

___1. Governmental

___a. City ___c. Regional

___b. County ___d. State

___e. Federal

___2. Non-governmental (specify)_____

_____

E. Time Period Covered by Evidence

___1. Less than 1 year ___2. 1 to 2 years

___3. More than 2 years

F. Direct Cost Requirements of Research (if discernable)

1. Finalcial $_____ 2. Manpower $_____

G. Aspects of Organizational Behavior Discussed

___1. Problem finding and structuring (defining)

___2. Goals, objectives and priority setting

___3. Alternative (option) generating, comparing and selecting

___4. Program formulation and design

___5. Operational management

___6. Performance measurement

___7. Environment scanning and forecasting

___8. Budgetary

___9. Other (specify)_____

___10. Mix (specify)_____

IV. WRITING

A. A Brief Description of Writing (if not strictly research); primarily

___1. Conceptual--descriptive

___2. Conceptual--analytical/critical

___3. Technical--descriptive (e.g., of a method)

___4. Technical--analytical/critical

___5. Empirical--descriptive

___6. Empirical—analytical/critical

___7. General literature review (specify subject)_____

___8. Annotated bibliography

___9. Anecdotal/illustrative

___10. Mix (specify) _____

B. Purposes of Writing

___1. Conceptual (i.e., how to think about a method)

___2. Procedural (i.e., how to apply a method)

___3. Results (i.e., results when a method is applied)

___4. Mix (specify) _____

V. ORGANIZATIONAL "PROBLEM" AND METHOD ADOPTED

A. What basic decision processes or methods existed at the time the method under study was adopted?

B. What "problems," including precipitating events, led to adoption of the method?

C. What method was adopted to address that problem(s)?

D. What are the intended (attributed) "coping" characteristics of the method?

E. What rationale or justification was given for adopting the method?

F. Under what conditions was the method adopted?

1. External initiative:

___a. full support ___b. mixed support ___c. opposition

2. Internal initiative:

___a. full support ___b. mixed support ___c. opposition

G. For what period was the method adopted?

___1. Permanent
___2. Permanent pending negative feedback
___3. Demonstration/experiment
___4. Temporary but renewable

VI. VALIDITY

Note: When appropriate for clarification, give brief narrative explanation.

A. Internal

1. Can the findings be backed up by data in the study? ___Yes ___No

   Is a hypothesis stated? ___Yes ___No

   Is the hypothesis tested properly? ___Yes ___No

2. Is the report self-consistent with respect to various assumptions and definitions? ___Yes ___No

3. If a sample is used to make general statements, is the sample of adequate size? ___Yes ___No Of adequate design? ___Yes ___No

4. If models are used, are the distortions introduced by simplifications so great as to invalidate the results for use in practice? ___Yes ___No

   Are the models used mathematically and theoretically sound? ___Yes ___No

   Are the inputs and outputs understandable and relevant to policy makers? ___Yes ___No

5. Does the study take into accout the practicalities of the real world and not just theory? ___Yes ___No

6. How might the study impact the effectiveness and equity of operations?

   _____

   _____

   _____

B. Content Validity (Curricular)

1. Did the researcher(s) analyze the content of the factor he intended to appraise and structure a representative instrument to measure the various aspects of the content? ___Yes ___No

2. Did he examine textbooks, courses of study, and objectives prepared in the field to determine content of the instrument? ___Yes ___No

3. Did he ask qualified experts to rate items as to their importance and devise a method of pooling their judgments? ___Yes ___No

4. Do the items represent a sample of the universe of the content that the instrument was designed to measure? ___Yes ___No

C. Predictive Validity

1. Does the study have predictive validity? That is, did it accurately predict performance? ___Yes ___No

D. Concurrent Validity

1. How do the results of this study correlate with the present condition it was purporting to predict?

E. Construct Validity

1. How well did the study understand the nature of the properties being studied?

2. To what extent is the study consistent with a given theory under consideration?

VII. OVERALL EVALUATION OF RESEARCH

Note: The following questions may be answered by a "yes" or a "no." However, when additional clarification is required, please use a brief narrative explanation.

A. Description and Statement of the Problem

1. Has a thorough analysis been made of all the facts and explanations that might possibly be related to the problem? ___Yes ___No

2. Are the arguments that were used to isolate the pertinent variables, explanations and relationships logically sound? ___Yes ___No

3. Does the statement of the problem encompass and agree with all the relevant facts, explanatory concepts and relationships that the analysis indicated had a bearing on the problem? ___Yes ___No

B. Scope and Adequacy of the Problem

1. Was the problem sufficiently delimited to permit an exhaustive treatment, yet sufficiently significant to warrant investigation? ___Yes ___No

C. Statement of Assumptions

1. Were the assumptions on which the hypotheses were predicated made explicit for the critical inspection of the reader? ___Yes ___No

2. Was the statement of the assumptions and the explanation of the theoretical framework within which the investigator worked presented in a logical and inclusive chain of reasoning? ___Yes ___No

D. Statement of Hypotheses and Deduced Consequences

1. Were the hypotheses in agreement with all the known facts and compatible with well attested theories? ___Yes ___No

2. Were the hypotheses testable? ___Yes ___No

3. Were the deduced consequences logically implied by the hypotheses? ___Yes ___No

E. General Considerations

1. Did the reported procedures adequately and correctly represent the particular factors, conditions, and relationships of the consequences tested? ___Yes ___No

2. Did these procedures collect the evidence with a minimum of effort? ___Yes ___No

3. Were the assumptions that underlie the use of the data gathering devices fully met in this study? ___Yes ___No

4. Did the report describe where and when the data were gathered? ___Yes ___No

5. Did the report describe precisely the number and kind of subjects, objects and materials used in the investigation? ___Yes ___No

6. If a pilot study in explain the procedures or instruments that were employed. ___Yes ___No

7. Were copies of the oral and written directions and the printed forms and questionnaires used in the investigation included in the report? ___Yes ___No

F. Sampling

1. Did the report describe with precision the population that was involved in the study? ___Yes ___No

   Did the sample come from this population? ___Yes ___No

2. Was the method of drawing the sample clearly specified? ___Yes ___No

3. Did the control and experimental groups come from the same population? ___Yes ___No

4. Were randomization techniques employed to select subjects from this population? ___Yes ___No

5. Was the sample sufficiently large? ___Yes ___No

   And drawn in a manner to represent the characteristics of the population? ___Yes ___No

G. Analysis of Data

1. Was the evidence collected to test each deduced consequence of a hypothesis adequately and logically analyzed? ___Yes ___No

2. Was the analysis objectively stated and free from mere opinion and personal prejudices? ___Yes ___No

3. Were broad generalizations made without sufficient evidence to support them? ___Yes ___No

4. Did the analysis contain any contradictions? ___Yes ___No

   Any inconsistencies? ___Yes ___No

   Any misleading, vague or exaggerated statements? ___Yes ___No

5. Did the researcher confuse facts with opinions and inferences? ___Yes ___No

6. Did the researcher omit or ignore evidence that did not agree with his hypothesis? ___Yes ___No

7. Was attention called to unpredicted relations as well as the hypothesized relations in the data? ___Yes ___No

8. Were uncontrolled factors that may have affected the results discussed? ___Yes ___No

9. Were any weaknesses in the data honestly admitted and discussed? ___Yes ___No

H. Summary and Conclusions

1. Were the summary and conclusions concisely and precisely stated? ___Yes ___No

2. Were the conclusions justified by the data gathered? ___Yes ___No

3. Were the conclusions qualified to show the limits within which they applied? ___Yes ___No

4. Were the conclusions stated in terms that make them verifiable? ___Yes ___No

5. Did the researcher state specifically what empirically verifiable evidence has been provided to confirm or disconfirm the hypothesis? ___Yes ___No

6. Did the researcher make a concluding statement in which he accepted or rejected the hypothesis? ___Yes ___No

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VIII.

Provide a brief synopsis of the Research in the space below. Include in your summary the following: stated purpose; principal questions examined; principal research method employed; major conclusions reached; new research issues identified.

This research trends project in recreation and leisure education for special populations was delimited to include a review of the current research available in 1) six professional journals including: Therapeutic Recreation Journal, Journal of Leisure Research, Leisure Sciences, Education and Training of the Mentally Retarded, Journal of the Association for the Severely Handicapped, and Mental Retardation; 2) previous and currently funded projects related to recreation and leisure education in the files of the Office of Special Education; and 3) doctoral dissertations from colleges and universities that have graduate programs in recreation and leisure services with an emphasis area in special populations.

In reviewing the data based studies in recreation and leisure education for special populations which were conducted over the past ten years, six principal content areas were identified. The six content areas included: 1) leisure skill assessment, 2) leisure skill acquisition, 3) community programming, 4) leisure counseling, 5) social skill development through leisure participation, and 6) school-based leisure education. Although many papers have been written and published regarding recreation and leisure education for special populations during the past decade, only those papers which were data based or provided future programming directions for the therapeutic recreation discipline are reviewed here. Pertinent literature falling under each primary category appears below:

Leisure Skill Assessment

Assessment is a critical process in planning and implementing leisure skill training programs for handicapped individuals. Two major forms of assessment influence the success of an individual's program. The first is baseline assessment, an initial observation of the client's ability level before actual implementation of a program. A second form of assessment is instructional assessment, an ongoing evaluation of the progress which the client is making throughout the program. Both forms of assessment are crucial in a leisure skills program because a) without baseline assessment, it will be impossible to determine the individual's skill level on the activities or skills which are to be taught, and b) without instructional assessment, it may be difficult to verify the progress made by clients. Recent special education legislation (Public Law 94-142) has also created a heightened awareness of the importance of assessment by mandating that evaluation data must be provided in the student's Individualized Education Plan (IEP) and periodically updated (Wehman & Schleien, 1980).

Yu, Jih-Min and Mendell, Ron
"Development and Utility of a Leisure Behavior Index," **Research Quarterly** (51)3, October 1980

Hypothesis: Paper develops a leisure behavior index (LBI) for ranking respondents according to the degree of their participation in a given set of leisure activities. Investigates relationships between the LBI and each of six socio-economic variables.

Method:

Sample: Data used in study provided by continuous National Survey undertaken by the National Opinion Research Center, University of Chicago, 1973.

Research Design: Principal component analysis was used to determine the underlying factors of the given set of reported leisure activities.

General Findings: Results of analysis of variance tests indicated that age, size of household, income and education were useful in measuring variability in leisure behavior.

Implications (policy relevancy):

Parker, R. A.; Ellison, C. H.; Kirby, T. F.; and Short, M. J.
"The Comprehensive Evaluation in Recreational Therapy Scale (CERT): A Tool for Patient Evaluation," **Therapeutic Recreation Journal** (9)4, 1975.

Hypothesis: Comprehensive Evaluation in Recreational Therapy Scale (CERT Scale) identifies and defines behaviors relevant to recreational therapy and provides a more objective means of rating clients on these behaviors. It was designed for use in short-term acute care psychiatric settings.

Method:

Sample:

Research Design:

General Findings: The different behaviors on this scale fall into several categories:

(1) General
- a. attendance
- b. appearance
- c. attitude toward recreational therapy
- d. coordination of gait

(2) Individual Performance
- a. response to structure
- b. decision-making ability
- c. judgment ability
- d. ability to form individual relationships
- e. expression of hostility
- f. performance in organized activities
- g. performance in free activities
- h. attention span
- i. frustration level
- j. strength/endurance

(3) Group Performance
- a. memory for activities
- b. response to structure
- c. leadership ability
- d. group conversation
- e. display of sexual role
- f. style of group interaction
- g. handles conflict
- h. competition in group
- i. attitude toward group decision

Implications (policy relevancy):

Wehman, Paul and Schleien, Stuart.
"Assessment and Selection of Leisure Skills for Severely Handicapped Individuals," **Education and Training of the Mentally Retarded,** 15, 1980, 50-57.

Hypothesis:

Method:

Sample:

Research Design:

General Findings: Purpose was to describe several types of leisure skill competency areas which could be assessed in severely handicapped individuals. These included proficiency with which objects were engaged, the length of self-initiated action, materials preference by clients, and frequency and direction of social interactions. In the second half of the article, guidelines for selecting leisure skills were presented. A variety of areas were identified as critical to the skill selection process, including leisure skill preference, functioning level and specific educational needs, physical characteristics, age appropriateness of the skill, access to materials and events, and participants' home environment.

Implications (policy relevancy):

Voeltz, L. and Wuerch, B.
"A Comprehensive Approach to Leisure Education and Leisure Counseling for the SHP," **Therapeutic Recreation Journal,** October 1981

Hypothesis:

Method:

Sample:

Research Design:

General Findings: Paper outlines (descriptive—conceptual) a leisure education process which allows for major input into leisure education programs by both SH learners and their caregivers. Procedures to assess leisure activity and materials preferences and to select appropriate instructional objectives receive primary emphasis.

Implications (policy relevancy):

Tinsley, H. E. and Kass, Richard A.
"Discriminant Validity of the Leisure Activity Questionnaire and the Paragraphs About Leisure," **Educational and Psychological Measurement** (40)1, Spring 1980

Hypothesis: To describe the discriminant validity of the LAQ and of an alternative form.

Method: (a) administered LAQ to 418 students; (b) administered to cross-validation sample of 209 students; (c) PAL, alternative form of LAQ, administered to 215 students.

Sample: Developmental Sample: 418 undergraduate college students. Cross-validation sample: 209 students. Second cross-validation sample: 215 students.

Research Design: Discriminant Function Analysis

General Findings: It was concluded that the use of the Paragraphs About Leisure (PAL) Questionnaire with results reported in terms of factor scores is the most valid and parsimonious measurement strategy of those investigated.

Implications (policy relevancy):

Leisure Participation and Skill Acquisition
As It Relates to Human Growth and Development

Many have seen a relationship between the types and quality of leisure participation and such factors as development of self-image and self-awareness; positive self-regard; socialization; physical fitness; coping ability and perception of reality; self-care and maintenance; independence; self-actualization; employability; development of perceptual-motor skills; intellectual functioning; and family unit behavior and acceptance of handicapping conditions. Considerable investigation of the interrelatedness of these and other variables and assessment of the validity of conclusions drawn from research are required before service delivery can adequately meet the needs of handicapped persons.

One of the antecedents of adult leisure patterns is the nature and quality of play patterns exhibited by infants and children. The handicapped child is often hampered by inadequate opportunity for a variety of developmental play experiences. Many ramifications of this experiential deficiency have been identified by researchers and educators; if more implications were understood, the full impact of play deprivation would probably be profound.

Considerable research has been undertaken in the area of play, and many theories and concepts have been proposed about the benefits and functions of leisure skill acquisition play behavior. To some, play is education, one of the primary means for making contact with people and things and learning about one's place in the world. Play is also seen as a humanizing agent through which the individual becomes a human being and learns to live in a social order and in a symbolic cultural world. Play is seen as an activity understood by the child, as an integral part of his/her world, and as his/her method of communication and means of testing and mastering the external world. Play is also considered a child's way to deal with experiences by creating model situations and mastering reality by experimentation and planning.

In another context, play is viewed as a means of channeling and expending surplus energy, a way of practicing instinctual behavior which will be necessary in adult life, and a means to achieve catharsis. Play has been utilized as a therapeutic medium to achieve a diagnostic understanding of the child, establish a relationship, break through defenses, relieve tension and anxiety, and, importantly, to develop a child's interest in play which can be carried over into daily life.

Most theorists agree that play behavior is part of a developmental sequence and that play, itself, progresses through different stages. Some theorists also agree that attitudes and interest concerning play, recreation, and leisure develop early and when accompanied by appropriate skills development, set the foundation for behaviors continued throughout life.

Since play behavior is dependent upon physiological, psychological, and intellectual processes, it is understandable that because of their handicapping condition, children may be deprived of or limited in early play experiences which form the basis for later leisure patterns and

behaviors. However, limitations imposed by factors other than the disability can be lessened by the understanding and intervention of significant persons in the life space of the handicapped child. And, too, the child can learn to lessen the interference of the disability in the performance of leisure skills.

A significant issue in leisure time activity for the handicapped is the investigation of many ways in which leisure behavior patterns are acquired or developed and the ways in which family, school, community and helping professions can contribute to the provision of environments and experiences to facilitate leisure skill acquisition and play for handicapped children.

Wambold, Clark and Bailey, Roberta
"Improving the Leisure Time Behavior of SP MR Children Through Toy Play,"
AAESPH Review, 1977

Hypothesis: Describes procedures that were designed to promote the toy play of SP MR children in an MR setting.

Method: Study was part of a classroom curriculum and took place over one academic year. A 30-minute group toy play was scheduled four of the five school days. The fifth day was field trip.

Time sampling procedures were used to assess the student's play behavior during a 30-minute play period. Group and individual interventions were established based on pretests and probe tests. Changes were made according to student needs, based upon data collected.

Sample: 6 children in state institution for SP MR in Madison, Wisconsin. Children attend a full day educational program.

Research Design:

General Findings: Indicated children's toy behavior improved in several ways:
a. children remained in play area for longer period of time on post test
b. played with a wider variety of toys
c. play with a single toy sustained over longer period of time

Implications (policy relevancy): MR children can learn to play independently.

Schleien, Stuart J.; Wehman, Paul; and Kiernan, John
"Teaching Leisure Skills to Severely Handicapped Adults: An Age Appropriate Darts Game," **Journal of Applied Behavior Analysis**, 14, 1981, 513-519.

Hypothesis: Study demonstrates the acquisition and generalization of dart skills by three severely MH adults.

Method: Program took place in adult community development center. By identifying the motor responses required to play darts, a seven-step task analysis was generated to facilitate instruction. Applied behavior analysis in systematic instruction was utilized.

Sample: 3 multihandicapped adults

Research Design: A combination multiple baseline across subjects and changing criterion design was employed.

General Findings: Results indicated not only could this supposedly difficult task be acquired by several SH individuals, but they could also generalize to other appropriate environments. Acquisition of this skill could help optimize their use of free time for leisure pursuits in a variety of settings.

Implications (policy relevancy):

Wehman, Paul and Rettie, Candy
"Increasing Actions on Play Materials by Severely Retarded Women Through Social Reinforcement," **Therapeutic Recreation Journal** (9)4, 1975

Hypothesis: Present research to increase frequency of actions on a broad range of play materials which were presented to three severely retarded women.

Method: The play program occurred daily during the noon hour leisure time period of a work activity program. Collateral data was gathered on frequency of social interaction between clients as well. Data was also collected on one woman who displayed self-stimulatory behavior.

Sample: 3 SR women (IQ less than 30)--all residents in a state facility for MR

Research Design: Multiple Baseline Design across individuals

General Findings: Data clearly indicate the functional effects of social reinforcement contengency on play behavior of each participant.

Modeling and demonstration were best means of communication.

The general control of the play situation could be maintained by one therapist.

Implications (policy relevancy):

Adkins, Joyce and Matson, Johnny L.
"Teaching Institutionalized Mentally Retarded Adults Socially Appropriate Leisure Skills," **Mental Retardation** (18)5, October 1980

Hypothesis: (1) to treat chronic institutionalized MR, (2) measure generalization effects of training, (3) compare different treatment methods for measuring/training leisure skills for the first time.

Method: Six severely mentally retarded females were exposed to a number of experimental conditions aimed at teaching an active leisure skill (potholder making).

Sample: 6 chronically institutionalized females—severe range of mental retardation

Research Design: An ABACADE multiple baseline format consisting of baseline, instructions, attention specific instructions in the skill, and follow-up was used.

General Findings: Specific instructions were the only condition that increase constructive use of time during leisure periods.

Training generalized to a number of related tasks (drawing, coloring) and was maintained during a six-week follow-up.

Implications (policy relevancy):

Schleien, Stuart J.; Ash, Terri; Kiernan, John; and Wehman, Paul
"Developing Independent Cooking Skills in a Profoundly Retarded Woman," **The Journal of the Association for the Severely Handicapped,** 6, 1981, 23-29.

Hypothesis: Article outlines the instruction, acquisition and generalization of three cooking skills by a SH woman.

Method: Instruction took place at a community adult developmental center for 15 minutes per skill, five days a week. Applied behavioral analysis and a series of special material and procedural adaptations were implemented.

Sample: A SH woman

Research Design: A multiple baseline design across 3 cooking skills was employed

General Findings: (1) Within 36, 46 and 23 sessions, boiling an egg, broiling an English muffin and baking a TV dinner were acquired respectively. Generalization probes were carried out in different environments and across materials. (2) These probes exhibited a significant increase of task analysis steps performed indepedently and they suggested the acquisition of functional stove uses that could be utilized for a number of other recipes.

Implications (policy relevancy):

Schleien, Stuart J.; Kiernan, John; and Wehman, Paul
"Evaluation of an Age-Appropriate Leisure Skills Program for Moderately Retarded Adults," **Education and Training of the Mentally Retarded**, 16, 1981, 13-19.

Hypothesis: Study describes development and implementation of a leisure skills program for MR adults in a group home setting.

Method: Phase 1 of the program consisted of initial baseline by observation to determine extent of residents' leisure repertoires. Phase II involved a weekly leisure counseling session, reinforcement training and as well as introduction to new recreational materials. Phase III entailed a return to baseline in which leisure counseling and reinforcement training were discontinued. Instruction was reinstated in Phase IV.

Sample: Six residents (3 male, 3 female) of a community group home for mentally retarded adults. Age range 27-52 years.

Research Design: Systematic observations were used by nine rotating observers. An ABAB reversal design was employed: (1) Baseline, (2) Instruction/Reinforcement, (3) Return to baseline only, (4) Instruction/Reinforcement.

General Findings: Results indicate a high quality leisure behavior among the group home participants when counseling, reinforcement, and exposure to new materials were introduced. A concomitant decrease in inappropriate social behaviors was noted as well.

Conclusion. Age-appropriate leisure skills facilitated a decrease in inappropriate social and stereotypic behaviors.

Implications (policy relevancy):

Reid, Dennis H.; Willis, B. S.; Jafman, F. H.; and Brown, K. M.
"Increasing Leisure Activity of Physically Disabled Retarded Persons Through Modifying Resource Availability," **AAESPH Review** (3)2, June 1978

Hypothesis: Effects of Altering the availability of leisure/recreational resources on the leisure behavior of 10 MH and MR adults and adolescents were investigated in a state retardation center.

Method: Following baseline, a leisure room was provided for voluntary use of common recreational materials and equipment, and during a designated period in early evening subsequent reversals to baseline conditions and reinstatement of leisure room conditions replicated the results. Examples of behavior categorized as desirable and undesirable were socially validated through ratings of legal advocates of residents.

Sample: 10 MH and MR adults and adolescents in a state center for retarded

Research Design: Time sampling procedures for observation. A combination reversal, multi-element design was employed to evaluate the effects of leisure room resources and the ward leisure resources.

General Findings: (1) All residents demonstrated large increases in desirable behavior (leisure) while in leisure room compared to baselines and times the resources were not available. (2) Providing the same leisure resources on the living ward was accompanied by increases in desirable leisure behavior although less than when provided in the leisure room

Implications (policy relevancy):

Rogers, Joan C. and Figone, Joanne J.
"The Avocational Pursuits of Rehabilitants with Traumatic Quadriplegia," **American Journal of Occupational Therapy** (32)9, October 1978

Hypothesis: The pre and post avocational pursuits of 35 . . . (see sample) were surveyed in terms of frequency and participation and enjoyment of the activities.

Method: Subjects responded to an interest survey designed to tap present and retrospective levels of participation and enjoyment in avocational activities numbering 19.

Sample: 35 persons with traumatic quadriplegia were surveyed in terms of avocational pursuits--discharged from rehab. hospital in California between 1973 and 1976 (30 males and 5 females) predominantly Caucasian.

Research Design: Descriptive survey approach. Subjects responded to an interest survey.

General Findings: (1) In general, moderate to large decreases in participation and no increases occurred for activities requiring physical exertion, manual dexterity or mobility outside the home. (2) In contrast, moderate increases and no decreases appeared for activities that were home-centered and of a solitary cognitive or passive nature. These trends are predictable from restrictions in physical capacity secondary to quadriplegia.

Implications (policy relevancy):

Day, Robert M. and Day, Michael
"Leisure Skills Instruction for Moderately and Severely Retarded: A Demonstration Program," **Education and Training of the Mentally Retarded** (2)12, April 1977

Hypothesis: Two months summer program was developed to provide students with independent recreational skills they could use without benefit of a supervisor.

Method: A three-level curriculum was developed composed of eight broad areas. Skills were limited to non-work oriented activities. Prior to curriculum, a survey of house parents determined each student's strengths, deficiencies and interests. Students were divided into three distinct instructional groups by level of child's adaptive behaviors. Students participated in the program for a period of 6 hours daily, 5 days a week, for 8 weeks. At conclusion, 133 instructional objectives of 1,215 subtasks had been attempted. 38 percent of all skills begun were mastered and 66 percent of the subtasks were successfully completed.

Sample: 30 moderately and severely retarded students whose age range was 7 to (?) years. IQs were below 20 to 57.

Research Design:

General Findings: The project demonstrated that functional leisure skills could be systematically taught to the moderately retarded . . . the same skills can be generalized to the living environment.

Implications (policy relevancy):

Wehman, P.
"Research on Leisure Time and the Severely Developmentally Disabled," **Rehabilitation Literature** 38(4), April 1977

Hypothesis: Report two experimental studies designed to ameliorate the leisure time problems of a population of institutionalized severely and profoundly retarded adults participating in an experimental sheltered workshop.

Method: Program was carried out as a part of broad work activity program. Play materials were purchased. Physical action on play toys and social interaction were observed. All three clients were receiving social reinforcement for actions on play objects or with each other by experimentor.

Sample: Exp. 1— 3 severely retarded young women in state facility for MR; Exp. 2—3 severely retarded adults (2 male, 1 female), all residents of state facility for MR.

Research Design: Multiple baseline data across individuals to assess sequentially the effects of social reinforcement contingency upon each client (Exp. 1 and 2)

General Findings: Data from both studies indicate the functional effects that the social reinforcement contingency had on play behavior and social interactions of clients. Furthermore, it was determined that modeling and demonstration were perhaps the medium of communications.

Implications (policy relevancy): (1) A direct intervention strategy of teaching is required to promote low-level play. (2) Teacher/trainer characteristics that are influential on "outgoing," "ability to get to level of client quickly," etc.

Rosenthal, S. R.
"Risk Exercise and the Physically Handicapped," **Rehabilitation Literature** (36)5, May 1975.

Hypothesis: Survey was made of the physical and mental reactions during and after horseback riding.

Method: A questionnaire was designed and sent to centers where horseback riding is offered to physically handicapped.

Sample: 102 physically handicapped children (75% were 5-15 years old) from centers in England, Ireland, Wales, and Canada and the U.S.

Research Design:

General Findings: Results indicated that subjects experienced positive mental and physical reactions associated with increase over time in motivation, mobility and courage.

Implications (policy relevancy):

Wehman, Paul et al.
"Developing a Leisure Skill Repertoire in SPH Persons," **AAESPH** Review (3)3, September 1978

Hypothesis: Three exercises and four table games were taught through task analysis and data based instruction to severely MR and MH adolescents and adults.

Method: Specific instructional direction and appropriate task analyses were provided in data-based programs involving the training of three exercises and four table games.

Sample: 3 severely retarded and handicapped adolescents and adults

Research Design: Results were evaluated in a multiple baseline design.

General Findings: Results indicated that SPH persons can acquire more diverse leisure time skills than has been previously demonstrated in the literature.

Ability to use leisure time is seen as a critical component in the move toward community reintegration.

Implications (policy relevancy):

Wehman, Paul
"Selection of Play Materials for Severely Handicapped: A Continuing Dilemma,"
Education and Training of the Mentally Retarded 11(1), February 1976

Hypothesis: Research regarding toy preference with non-retarded infants and young children is reviewed, and guidelines are presented for toy selection and play materials with severely retarded preschoolers.

Method:

Sample:

Research Design:

General Findings:

Implications (policy relevancy): (1) Special educators need to develop more appropriate play materials. (2) Empirically validating a toy taxonomy could be of value in programming different behavioral areas. (3) Research is required to document which type of materials, adapted or otherwise are most useful in developing play skills of SH.

Inhibitors/Facilitators of Leisure Participation: Programming in the Community

Environmental barriers have long been a concern of those working with handicapped persons and are coming to the attention of the general public as a result of the advocacy and consumer movements. Successful functioning within this society requires the ability to understand, interpret, and act appropriately upon signs, symbols and communications within the non-human and human environments; exert an influence upon external forces; have access to resources; move about with minimal difficulty; and assimilate experiences. Handicapped children and adults are greatly hampered in their daily living, work, and leisure participation by observable and subtle physical barriers and attitudes.

Often handicapped persons are unaware of the causes of their frustration and limited participation in normal human activities, and it takes a degree of awareness and exposure for them to realize that they are missing something which others have. Transportation to, entrance into, and mobility within recreation areas and facilities are important factors which facilitate or inhibit leisure participation. Usability of materials, equipment, and apparatus is equally as significant in fostering involvement in leisure activities. Handicapped children and adults are often excluded from many leisure options becuase of the limitations imposed by their physical impairments; in general, programs do not provide the degree and types of modifications and adaptation necessary to accommodate these disabilities. The handicapped population is generally not encouraged to achieve self-reliance and resourcefulness which would allow them to better utilize the available opportunities.

One of the prime issues in increasing participation in the community is to study the need for special equipment and materials; rules and regulations; activity space and facilities, activity scheduling; and instructional styles. It is also important to determine what types of problems the handicapped have in participating in regular programs and facilities and to see how they perceive so-called barriers.

Important in decreasing environmental barriers is legislation (and strict enforcement) and the work of architects, planners, and transportation experts. The 1968 Architectural Barriers Act requires that structure built or renovated with public funds be accessible to handicapped individuals. Medical technology and engineering fields also can contribute to increased leisure participation of the handicapped by designing safe, effective appliances to facilitate mobility and to correct physical impairments.

Reynolds, R.
"A Guideline to Leisure Skills Programming for Handicapped Individuals," in P. Wehman and S. Schleien (Eds) **Leisure Programs for Handicapped Persons: Adaptations, Techniques and Curriculum.** Baltimore: University Park Press, 1981, 1-13.

I. Paradigms

A. Pomeroy (1974) identifies leisure and education requirements as development of social, self-help, emotional maturity and physical mobility.
B. Forness (1977) designed a curriculum program for transition of handicapped into community and is based upon four stages of educational tasks.
C. Burdette & Miller (1979) emphasize a model of recreation involving stages of motor skill development:
   1. sensory-motor/self-help
   2. fine and gross motor skills
   3. skill specific activities—sports/games
D. Hutchison & Lord (1979) view various settings in which recreation occurs as a progressive and sequential procedure based upon level of segregation.

II. Emerging Empirical Support

A. Recent review of recreation studies—1966-1975 (Matthews 1977) isolated several instances in which the leisure involvement of handicapped, non-handicapped children and adults resulted in improved ability to:
   1. participate in games
   2. participate in all appropriate sports
   3. gains in motor coordination and dexterity
   4. increased purposeful and organized free play

III. Legislative Mandate

A. PL 90-480—Architectural Barriers Act
B. Rehabilitation Act of 1973—Amended 1978
C. PL 94-142

IV. Trends in Service Functions and Challenges

A. Provision of individualized leisure and educational programming
B. Medical model replaced by more appropriate orientations to developmentally disabled persons
C. Reconciliation of behavior techniques and normalization
D. Transfer of training must be addressed

Edginton, C.; Compton, D; and Hanson, C.
"Programming in Recreation and Leisure Service Organizations," **Recreation and Leisure Programming: A Guide for the Professional**, pp. 270-280.

I. Community Based, Youth Serving Organizations

A. Simple summary of utilization eight major youth organizations in communities as recreational centers for programming for youth. No research reviewed.

II. Recreation Services for Special Populations

A. Discusses and defines therapeutic recreation
B. Discuss spectrum of services available but cite no specific research
C. Suggest Kraus' guidelines for program objectives and provision of services as well as continuum of settings for least restrictive environment.

Bates, P. and Renzaglia, A.
"Community-Based Recreation Programs," in P. Wehman (Ed.) **Recreation Programming for Developmentally Disabled Persons.** Baltimore: University Park Press, 1979, 97-125.

The rationale for the development of community recreation opportunities for the developmentally disabled seems to be well established from both a theoretical and practical perspective. The influences of normalization and deinstitutionalization (Nirje, 1969; Wolfensberger, 1972) have contributed toward a positive atmosphere for the development of community-based recreation services. In addition, several reports (e.g., Stanfield, 1973) have identified that the developmentally disabled adult has ample leisure time available, but rarely participates in community recreation during this free time. By not participating in community recreation, the social isolation of the developmentally disabled individual is accentuated. Furthermore, the potential benefit in overall social adjustment accruing from such participation has been suggested by several community recreation advocates (e.g., Hitzhusen, 1975).

Community Parks and Recreation Services--Several surveys have been conducted in various parts of the country to assess the availability of community recreation to special populations (e.g., Andres, 1967; Hayes, 1969; Thompson, 1969; Edginton, et al., Compton and Goldstein, 1976). Each of these studies relied extensively on distributing questionnaires to various professionals within the community who might be involved in recreation and/or programming with the developmentally disabled.

In two statewide surveys (Hayes, 1969; Edginton et al., 1975) and one national survey (Lancaster, 1976), the needs assessment results have generally been supportive of one another. The reasons that community recreation services were not offered for the developmentally disabled in the Edginton, et al. (1975) survey closely paralleled the program development priorities listed earlier by Hayes (1969). These included lack of funds, inadequately trained professional personnel, and unawareness of need.

Most communities surveyed in the statewide surveys and the national survey indicated that they accepted the responsibility for developing recreation services for the developmentally disabled. Since the need to develop services is accepted by most communities, it seems that funding, expertise, and awareness are the major factors detracting from expansion of community recreation opportunities.

Eyman, Richard and Call, Tom
"Maladaptive Behavior and Community Placement of Mentally Retarded Persons,"
American Journal of Mental Deficiency, (82)2, 1977

Hypothesis: Prevalence of maladaptive behavior was investigated for retarded individuals residing in institutions, community facilities, and their own home. In addition, the relationship between behavior problems and sex, age level, level of retardation and race was examined.

Method: Data was obtained as part of a larger effort to evaluate services for DD persons.

Sample: Retarded individuals receiving services from two regional centers in California and Colorado institutions. From a total of 10,597 clients, complete information was available for 6,870 individuals.

Research Design: Chi-squares were used to evaluate the degree of relationships among variables.

General Findings: Findings confirmed a much higher rate of behavior problems in the institutions as compared to community placements. Data also suggested that the profoundly retarded individuals, unless handicapped by not being able to move around, exhibit more injurious behavior than moderately and mildly retarded persons.

Implications (policy relevancy): Suggest a need for intensified individual attention and programming for retarded persons with behavior problems if community placement is to be successful for large numbers of DD persons.

Leisure Counseling/Development of Leisure Profiles

One of the important contributions which personnel can make to increasing leisure time activity participation by the handicapped population is to initiate leisure counseling as part of the leisure services system to:

- assist the individual to maintain and strengthen his existing affiliation with family, friends, and community groups;
- help the individual form new ties with individuals and groups;
- teach the individual how to make use of available community resources for recreation;
- stimulate the individual's awareness of his own recreation needs;
- open new areas of recreation interest and develop new recreation skills; and
- mobilize community resources to increase leisure participation options.

Counseling helps to motivate the individual to participate in experiences which will be beneficial in light of his needs and desires for growth and experience. The leisure counselor utilizes all data and personal knowledge about the handicapped individual to foster self-generated motivation and to achieve or stimulate positive, outreach action.

Leisure counseling is especially important within the family unit. An "Ac[illegible] Survey" undertaken by the Mid-Missouri Mental Health Center in [illegible] indicated a high correlation between emotional disturbance in children and inadequate parent/child relationship. One of the areas of this inadequate relationship is that of family recreation and leisure time activity patterns. Through counseling, family recreation habits may be modified to create a more positive climate within the family.

Recreation counseling attends to the recreation needs and interests of the individual as they relate to age, education, family, socioeconomic, and cultural elements; the recreation resources within the community; attitudes toward recreation; and contact with recreation personnel and facilities in the community. The leisure counselor seeks to help the individual establish a balanced leisure program, including elements for social interaction, creative expression, physical exercise, spectator appreciation, intellectual stimulation, and solitary relaxation.

Leisure counseling, coupled with vocational counseling, allows the professional to serve the handicapped individual as a whole person.

McLellan, R. W. and Pellett, Lane
"Leisure Counseling: The First Step," **Therapeutic Recreation Journal,** (9)4, 1975

Hypothesis: Describes how one leisure counseling program based on values clarification strategies was implemented and evaluated.

Method: Goal: motivate patients to deal more constructively with leisure time after leaving hospital. Six session leisure counseling program was designed for a short-term psychiatric hospital where an average stay was 38 days. Sessions were held for one hour, twice a week, over three weeks. Their behavior was evaluated.

Sample: 7 patients participated because they could participate in a group setting and had been referred to alleviate depression

Research Design: Evaluation of patients focused on patient's participation in available hospital activities and attitude change toward leisure

General Findings: The participation index showed patients apparently increased their participation in programs to a greater extent.

Results of subjective evaluation indicated positive attitude change in 11 out of 14 possible times in five of the seven patients.

Implications (policy relevancy):

Compton, D.; Witt, Peter A.; Sanchez, B. D.
"State of the Art . . . Leisure Counseling," **Parks and Recreation,** 15(8), August 1980

Hypothesis: To determine a state of the art, a thorough examination of the field's progress over last five years was conducted. Study relied on the review of literature and on personal interviews.

Method:

Sample:

Research Design:

General Findings:

1. Lack of agreement on how to define leisure and thus the purpose or aim of the counseling process
2. Is leisure functioning an independent or dependent variable
3. Is intention of leisure counseling rehabilitation or education
4. Research and empirical evidence regarding effectiveness of leisure counseling is lacking
5. Lack of instrumentation

Implications (policy relevancy): Gives a good review of practice of leisure counseling in the field.

Kinney, Walter, Jr. and Dowling, Dorothy
"Leisure Counseling or Leisure Quackey," **Parks and Recreation,** January, 1981

Hypothesis:

Method:

Sample:

Research Design:

General Findings: Leisure counseling suffers from disorganization characterized by methodological differences, semantic disagreements, and no defined eithics. There is a strong disparity between theory and practice.

Emphasis in leisure counseling must shift to the counselor and the necessary counseling relationship that should be established.

Focus of article is on emphasis of skill of counselor to upgrade professionals in the fields.

Implications (policy relevancy):

Sessoms, H. Douglas
"Leisure Counseling: A Frank Analysis of the Issues," **Parks and Recreation,** January 1981

Hypothesis:

Method:

Sample:

Research Design:

General Findings: Author's viewpoint is that leisure counseling has become a professional issue for two reasons:

1) the need for a reason to exist
2) increasing number of persons who want to play "mind games"

Basic to the assumption of the counselor role is the resolution of three fundamental questions:

1) Do we have instrumentation necessary to assess recreation interests?
2) Have we operationally defined the "ideal" leisure state?
3) Does the public expect and mandate recreation and park professionals to be counselors?

Implications (policy relevancy):

Social Skill Development Through Leisure Participation

The development of leisure skills in severely handicapped children will enhance social, cognitive, and gross/fine motor skill development. Involvement in recreational activities offers some of the most effective means for children to acquire and develop these skills.

Social skill development is facilitated through group play. Children who fail to develop the necessary skills to engage in play are considered handicapped. The development of cooperative play behavior and participation in leisure activities will lead to making friends, getting along with others, learning to share, compete, cooperate, take turns, and a generally more satisfactory social adjustment. An adequate social adjustment is required for successful daily living, including time on the job, in the community, and with friends and family (Wehman & Schleien, 1980).

Additionally, severely handicapped children (e.g., autistic) often engage in seemingly inappropriate, unacceptable social behavior. Children who are constructively using their leisure time do not exhibit the behaviors (i.e., body rocking, head banging, violent actions, social withdrawal) typically characteristic of these individuals. Research has clearly indicated that there is an inverse relationship between acquisition of play skills and self-stimulated/abusive behavior. Recreational activity of a social nature provides opportunities through which the participant can learn to adjust to the social demands of society (Wehman & Schleien, 1980).

Reynolds, R. and Arthur, M.
"Effects of Peer Modeling and Cognitive Self Guidance on the Social Play of ED Children," **Therapeutic Recreation Journal,** First Quarter, 1982

Hypothesis: Study examined efficacy of a peer modeling—cognitive self-guidance training strategy on the social play of institutionalized behavior disordered children.

Method: Dependent variable measurement was obtained through the use of the Parten Social Play Scale. Assessment of the potential of the treatment for use in TR settings was achieved by determining the amount of transfer of training on selected cooperative play behaviors from an experimental to a free-play setting and by examining the amount of generalization to other toys which elicit social play.

Sample: 8 behaviorially disordered children, ages 7-11 years, from residential psychiatric center

Research Design: Inter and intra observer reliability were assessed by computing Pearson Product Moment Correlation coefficients. Chi-square analysis for comparison of observer/experimentor and observer/observer agreement.

General Findings: In general the technique tested demonstrated potential for aiding emotionally disturbed children to acquire social play skills in institutional settings. Several recommendations are made to leisure service practitioners concerning the implementation of this approach in residential treatment settings.

Implications (policy relevancy):

Quilitch, H. R. and Risley, T. R.
"The Effects of Play Materials on Social Play," **Journal of Applied Behavioral Analysis** (6)4, Winter 1973

Hypothesis: Examined possibility that children's social behavior might also be significantly influenced by the nature of available play materials.

Method: Children in an urban recreation center were systematically provided with toys designed for social or isolated play. Experimental sessions involved six subjects for 45 minutes. Used time-sampling procedures to collect data.

Sample: Boys and girls averaging 7 years of age attending Juniper Gardens Community Recreation Center, primarily black poverty neighborhood

Research Design: not mentioned

General Findings: Social play occurred only 16 percent of the time when children were provided with "isolate" toys whereas social play occurred 78 percent of the time when children were provided with social toys.

Implications (policy relevancy): This selection of play materials should be an important consideration in any effort to teach children social behaviors.

Peterson, N. L. and Haralick, J. G.
"Integration of Handicapped and Nonhandicapped Preschoolers: An Analysis of Play Behavior and Social Interaction," **Education and Training of Mentally Retarded,** October 1977

Hypothesis: (1) With what frequency do normal children in a preschool choose handicapped children as playmates? (2) Do types of play differ between normal/handicapped and normal/normal? (3) Is sex a factor?

Method: Social interactions between normal and handicapped were observed during free play in a preschool classroom (twice a day). A time-sampling observation code was used by three observers during two 30-minute sessions.

Sample: 5 normal children; 8 handicapped children

Research Design:

General Findings: Study generally indicated true social integration of handicapped and nonhandicapped children even though there was some discrimination by the nonhandicapped in favor of other nonhandicapped children.

Implications (policy relevancy):

Stokes, T. F.; Baer, D. M.; and Jackson, R. L.
"Programming the Generalization of a Greeting Response in Four Retarded Children,"
Journal of Applied Behavioral Analysis (7)4, Winter 1974

Hypothesis: None stated, only description of study

Method: Reinforcement techniques of prompting and shaping were employed to develop hand waiving in four institutionalized retarded subjects.

Sample: 4 institutionalized MR subjects

Research Design: A multiple baseline design across subjects or "sequential analysis"

General Findings: Training and maintenance of the greeting response by one experimentor was not usually sufficient for generalization of the response to more than 20 other members of the institution staff who had not participated in training. However, high levels of generalization to staff members were recorded for three subjects over a period of 1-6 months when a second experimentor maintained the response in conjunction with the first trainer.

Implications (policy relevancy):

Strain, P. S.; Kerr, M. M.; and Ragland, E. W.
"Effects of Peer-Mediated Social Initiations and Prompting-Reinforcement Procedures in Social Behavior of Autistic Children," **Journal of Autism and Developmental Disorders**, Vol. 9(1), 1979.

Hypothesis: Peer-mediated social initiations and prompting/reinforcement procedures were evaluated as interventions for increasing the positive social behavior of autistic children--also can it be generalized.

Method: Subjects were taken to experimental setting for 20-minute training session at 1:00 pm. At 10:30 am subjects were brought for 20 minutes for generalization exp. setting. An observational system to assess social behaviors as well as prompting and social reinforcement events were used.

Sample: 4 autistic children

Research Design: Study employed a withdrawal-of-treatment design (Baseline/I, Prompting and Reinforcement, Baseline II, Social Initiations)

General Findings: There was positive and comparable behavior changes in the treatment setting, but no increase in positive social behavior was observed during generalization assessment.

Implications (policy relevancy): Remediation of social withdrawal in autistic children requires a 1-to-1 technique. Socially competent peers in the setting may provide a skillful resource for social behavior interventions.

Young, Clifford C. and Kerr, Mary M.
"The Effect of a Retarded Child's Social Initiations on the Behavior of Severely Retarded School-Aged Peers," **Education and Training of the Mentally Retarded,** Volume 14, October 1979

Hypothesis:

a. can behavior of severely retarded by improved through peer training?
b. can a retarded child function effectively as a peer trainer?

Method: A clinical investigation was designed to involve a retarded child as the peer trainer for two severely retarded target children in an effort to increase their social behavior skills. Each experimental day, experimenter said it was play time and took the three children to the room. An observation system was used to measure dyadic interactions. There were two classes of behavior: motor-gestural and vocal-verbal.

Sample: Jack (IQ=67; CA: 5-11) trained as peer trainer; Linda (IQ=27; CA: 10-2) and Mark (IQ=34; CA: 6-11) were selected as target subjects

Research Design: Multiple baseline design was used to evaluate the effectiveness of the peer intervention procedure. Study employed a reversal design with implications across subjects.

General Findings: Results indicate that a retarded child can be trained to influence the social responsiveness of severely retarded, withdrawn children within an intra-class peer-mediated format and with minimal direct teacher involvement.

Implications (policy relevancy):

Stainback, W.; Stainback, S.; Raschke, D.; and Anderson, R. J.
"Three Methods for Encouraging Interactions Between Severely Retarded and Non-Handicapped Students," **Education and Training of the Mentally Retarded,** October 1981

Hypothesis:

Method: Three methods which classroom teachers could use to guide and encourage interactions between severely retarded and nonhandicapped students in an integrated classroom situation are described:

1) Classroom organization and structure
2) Training the retarded in interactional skills
3) Training the nonhandicapped to interact with severely retarded

Sample:

Research Design: General research supports each method

General Findings: In conclusion, mere physical placement of severely retarded students in the educational mainstream may not meet goal of meaningful social interaction. Physical placement coupled with systematic implementation of procedures to promote social interactions may be needed.

Implications (policy relevancy):

School-Based Leisure Education

Leisure education is a more specific term which encompasses the educational aspects and concepts of applied leisure theory. It is highly desirable to include within the school curriculum experiences which create awareness of and positive attitudes about leisure which will facilitate participation of the handicapped individual in leisure time activities. Integrating leisure education concepts, skills, knowledge, and attitudes into daily classroom activities can assist handicapped children to develop a positive regard for use of leisure time and to achieve a healthy balance between work tasks and leisure activities.

Within the broad purview of leisure time activity and recreation and leisure education for the handicapped exist a myriad of issues which lend themselves to investigation and discussion. These have periodically surfaced in lists at various professional conferences and/or in publications related to research and research needs of the field. Among the most recent include the Task Force Report on Recreation Needs of the Handicapped (HCRS Nationwide Recreation Study, 1980) and Leisure Activity Participation and Handicapped Populations: Assessment of Research Needs (NRPA, 1976).

It is possible and highly desirable to include within the school curriculum experiences which create awareness of and positive attitudes toward leisure and to develop within the students a variety of skills which will facilitate participation in leisure time activities. Integrating leisure education concepts, skills, knowledge, and attitudes into daily classroom activities can assist handicapped children to develop a positive regard for use of leisure time and to achieve a healthy balance between work tasks and leisure activities.

Additionally, instituting a career education framework for leisure occupations may assist handicapped children in identifying jobs within the Hospitality and Recreation Occupations Cluster. There are a wide variety of jobs in this cluster which are within the capability of persons displaying a broad range of disability. Leisure time activity may be appropriately linked to the world of work and may lead to satisfying employment.

The leisure education and career education concepts are appropriate ways of linking the community with the treatment or academic institution to provide a wider variety of programs and services within a locale and to increase the handicapped child's ability and interest in using the resources available.

Paske, Valdimar and Weiss, Walter
"A Study of Leisure Time Activities of School Students," **AFB Research Bulletin** No. 25, January 1973

Hypothesis:

Method: Students made daily entries on a questionnaire from Monday through Sunday about their leisure time activities. Questionnaires were collected each day. Taking the grand total of leisure time for all students as 100, the percentage of time spent on each activity was calculated.

Sample: Total of 78 students from a municipal school in a metropolitan area. State Institute for Blind and State Morning School for Deaf in Copenhagen.

Research Design:

General Findings:

- school for deaf students spent majority of time at meals which is their time for socializing and communicating
- household chores: girls higher than boys; School of Deaf, highest; School for Blind, lowest
- high percentage from public school students in listening to radio and tv
- time used for passive sports very high

Implications (policy relevancy):

Strandy, C.; McLaughlin, T. F.; Hunsaker, Don
"Free Time as a Reinforcer for Assignment Completion with High School Special Education Students," **Education and Treatment of Children** 2(4), Fall 1979

Hypothesis: Purpose was to determine if free time could be an effective reinforcer for assignment completion and accuracy.

Method: Each daily session lasted 90 minutes, before which each student was given four assignments. Assignments were expected to be completed at the end of the period. When the students completed their work, assignments were graded and feedback given. Dependent measure was number of assignments completed each day.

Sample: Six high school special education students, age range 15.5 to 17.9

Research Design: ABAB evaluation/experimental design

General Findings: (1) Procedure indicated that a greater percentage of assignments were completed when the free time contingency was in effect. (2) Accuracy of performance was fairly stable and was not under the systematic control of the procedure. (3) The use of free time was effective in controlling assignment completion for five of the sic high school students.

Implications (policy relevancy):

Voeltz, Luanna and Apffel, James A.
"A Leisure Activities Curricular Component for SH Youth: Why and How," **Viewpoints in Teaching and Learning,** 1981

Hypothesis: Presents a rationale for including a leisure-time activities curriculum component in educational programming for SH children and youth. A brief description of a model demonstration project to develop an innovative leisure curriculum component is introduced.

Method:

Ball, Chasey; Hawkins, D.; and Verhoven, P.
"The Need for Leisure Education for Handicapped Children and Youth," **Journal of Physical Education and Recreation,** March 1976

Hypothesis: Presents a rationale for dealing with education for leisure for the handicapped. Discussion of enforced leisure, need for attitude change and discussion of programs in leisure education.

Method:

Eyde, Donna and Menolascino, Frank J.
"Prescriptive Play as a Prelude to Maximizing Personality Growth Among SH,"
Viewpoints in Teaching and Learning, 1981

Hypothesis:

Method:

Sample:

Research Design:

General Findings: The article reviews the role of play in educational programs for nonhandicapped learners, the developmental sequence of play behaviors, and the potential of play activities for facilitating personality growth among the severely handicapped.

Implications (policy relevancy):

Schleien, Stuart J.
"Effects of a Behavioral Training Program of Cooperative Leisure Skills Activities on Severely Learning Disabled Children." University of Maryland, 1982 (unpublished Doctoral Dissertation)

Hypothesis: Evaluated the effects of a behavioral training program on the cooperative leisure skill activity competencies and leisure time use of severely LD children.

Method: Assessed children's level of play (i.e., inappropriate, isolate, parallel, cooperative) and then instructed with specific training methods and special materials to facilitate student's acquisition, maintenance and generalization of cooperative leisure skills.

Sample: 23 LD children, ages 7-13 attending two classrooms of a public school.

Research Design: Statistical Analysis of a single subject multiple baseline experimental design.

Results: Indicated a substantial increase in socially appropriate and constructive play and a concomitant decrease in inappropriate and isolate play among a majority of the severely learning disabled children.

Beland, Robert M.
"An Analysis of Role Perception and Needs Assessment of Selected Special Educators Toward Leisure Education for the Handicapped." University of Maryland, 1980 (unpublished Doctoral Dissertation)

Hypothesis: Determine current role perception and competency of special education teachers and administrators towards implementing a school-based leisure education curriculum for handicapped children.

Method: A survey of 333 special education teachers and 57 special education administrators was administered to determine their perception of their roles and ability in leisure education. Two separate survey instruments were developed, using review of literature, panel of experts and pilot testing.

Sample: 333 special education teachers and 57 special education administrators

Research Design: Survey instrument: Data analysis was cross tabulation and T-test for significance.

Conclusions:

1. There was a lack of proficiency in most competencies essential for implementing leisure education programs for handicapped on part of teachers and administrators.
2. Leisure education was rated as important.
3. Older and more experienced teachers perceived leisure education as important.

PART III

STATE-OF-THE-ART: A Synthesis of Research and Literature In Recreation and Leisure Education for Special Populations

STATE-OF-THE-ART

This literature search for data based research in recreation and leisure education pinpointed a number of underdeveloped research areas. In light of the fact that handicapped individuals, especially the more severely handicapped, have an abundance of discretionary time, this paucity of valid and reliable research studies becomes a serious problem. If anything has remained consistent in the few pieces of data based literature we have found, it is the fact that without valid and systematic leisure skill instruction, handicapped individuals will regress further, exhibiting even greater frequencies of inappropriate and uncooperative free time behaviors.

The purpose of this literature search was to identify and evaluate assessment techniques, instructional procedures, and intervention strategies in leisure education programming in the current literature that has been utilized to facilitate leisure and social skill development in handicapped children. The material identified and presented in this report provides the basis for the systematic programming of leisure and social skill development.

One of the major programming goals in a majority of the literature found in the past ten years was to contribute to the handicapped individual's ability to function independently in the community. By fostering the child's capability for independent living, the need for institutionalization was significantly reduced. Many of the individuals were found to be isolated from peers and the community in general because of unacceptable social behavior, lack of any leisure skill repertoires, and negative attitudes of community members. It was nearly impossible for these youngsters to develop any social relationships, and they were typically excluded from normal contacts. Most recreational experiences had a contribution to make in social and leisure skill development and community living. One of the more effective ways described to reduce the attitudinal barriers prevalent within the mainstream of community life was for handicapped children to play with normal peers, allowing their friends and classmates to notice the similarities, not the differences, between them when they played.

Through analysis of the recreation and leisure education that was conducted over the past decade, it becomes immediately apparent that only a minimal quantity of data based studies describing leisure education and leisure skill development for handicapped persons have been conducted. Although several authors have reported an increase in data based research activity in this programming area (Lewko & Crandall, 1980; Martin, 1975), to date, a limited number of valid studies have been published. Several of the programs failed to provide for maintenance or generalization of previously acquired skills on the part of the handicapped youngster. It was also recognized that an even smaller amount of research efforts have been conducted for the handicapped adult and aged populations.

Articles were selected for review based on several criteria. The requirement that each article's subjects included handicapped children,

ages 0-21 was the initial criterion. A second criterion was that the publications address the leisure education and recreation disciplines. The third criterion was that the studies had to be either data based or a philosophical piece with obvious implications for future leisure education programming direction. The articles selected represent an extensive sampling of the therapeutic recreation and special education literature.

In past years, the research activities in leisure skills concentrated on recreation as a means to an end. As a therapy, recreational activity was used as a treatment of illness or sickness. This approach is consistent with the medical model treatment orientation to rehabilitation. The individual was participating in prescribed recreational activity with the ultimate goal of the alleviation of pain and sickness and a return to health. Recent research activities have taken a new direction. The research activities represented in the current literature reflect a preventative, skill acquisition, and community integration approach. Very little data based research has been produced recently that was recreational activity as a treatment modality. On the other hand, leisure skills are currently being selected for instruction to increase the leisure skill repertoires of handicapped individuals and to enhance independent living in the community.

Handicapped children have received instruction in ball skills (Kazdin & Ericksen, 1975; Whitman, et al., 1970), simple board and table games (Wehman, 1977; Wehman, et al., 1976; Schleien, Wehman & Kiernan, 1981), independent free play (Wehman, 1977) and social play (Palatzian, et al., 1971). Additionally, using leisure skills and recreational activities to teach skills in other curricula areas has recently been documented. Bates & Reuzaglia (1982) taught verbal labeling skills to a profoundly retarded individual using a simple board game; Schleien, Kiernan and Wehman (1981) taught meal preparation, cooking, and number identification skills using recreational activity as a medium to a similar handicapped population and several investigators have recently developed social skills in handicapped individuals.

Recently, therapeutic recreators and educators have searched for procedures in education and community settings that use play and recreation interventions to develop and maintain peer interactions. With the use of operant conditioning theory within a recreation context, they discovered that (1) social consequences (Gable, et al., 1978), (2) variables such as play materials (Quilitch & Risley, 1973), (3) peer instruction (Reynolds & Arthur, 1982), and (4) use of task-specific situations (Santomier & Kopgzuk, 1981) were often used to promote socialization and leisure skill development. Also, the reduction of self-stimulating and other inappropriate behaviors covarying with the acquisition of toy play and leisure skills has been documented (Hopper & Wambold, 1978; Sailor, 1980; Schleien, Kiernan & Wehman, 1981).

The challenge of meeting the complex and changing needs of society has given an impetus to an increasing interest in leisure counseling. This relatively recent trend dates back less than 20 years. It was first mentioned in the literature in the late 1950's and early 1960's and was associated with the concept of rehabilitation. It appears that the

interest in leisure counseling was the result of increased concern for offering services which meet the needs of the whole person--physical, emotional, social, intellectual, and vocational--as well as for planning and implementing services appropriate for individuals after discharge from institutions (O'Morrow, 1970).

More recently, a number of factors (e.g., shortened work week) have stimulated the development of leisure counseling as a service in settings not specifically concerned with rehabilitation. Moreover, the literature suggests that a new discipline of counseling for leisure is emerging which is not found solely in hospitals. Peterson (1977), in a review of all the definitions of leisure counseling in the literature, summarized leisure counseling as a process. "Its ultimate aim is the development of socio-leisure behaviors. It is predominantly a cognitive-process term." The process utilizes verbal facilitation techniques from a vast array of existing methodologies. Its goal is to help clarify and establish values and attitudes which allow the individual to develop independent, meaningful leisure behaviors.

Due to the lack of data based research in this program only, a review of several of the more popular writings concerning leisure counseling are presented below. Dickason (1972) made one of the earliest attempts to analyze the various approaches to leisure counseling. He identified two major approaches to leisure counseling: a client-centered and behavioral approach. The client-centered approach was described as having the individual express and assess his interest, evaluate options and alternatives, and make self-directed decisions. The behavioral approach was viewed as being more directed by the counselor who set goals for the client.

McDowell (1976) analyzed several leisure counseling orientations and identified four broad approaches or delivery systems: 1) leisure counseling as a leisure resource guidance service, 2) leisure counseling as a therapeutic-remedial-normalizing service, 3) leisure counseling as a lifestyle development-education service, and 4) leisure skills development.

Hayes (1977) described a leisure counseling model for handicapped individuals which depended largely upon the counselor's initiative and ability to develop the program in concert with the goals, objectives and policies of the agency in which the program is situated.

Gunn (1977) emphasized that regardless of the degree of complexity inherent in the counseling relationship, specific training in verbal facilitation techniques and procedural strategies are clearly necessary in order to effect positive behavioral changes. Therefore, Gunn suggested a systems approach to leisure counseling which included: 1) general requirements for counseling. 2) the process for implementing a leisure counseling program, and 3) general outcomes of the counseling program.

It is apparent from the literature that the concept of leisure counseling has been and remains the concern of a number of human service fields. Areas of rehabilitation counseling and health education, as well as recreation and psychology have advocated for the inclusion of leisure time

use and counseling as an integral component of the rehabilitation process. But even though several disciplines have demonstrated a concern for the leisure counseling process, there has been little direct communication and cooperation among the various disciplines resulting in a parcity of data based literature in the area.

Although its status as a legitimate and important content area in program planning was reaffirmed in PL 94-142, only a few developed curricula and research and training projects promoting leisure education for handicapped students have been made available.

In 1975, Florida State University was the site for the initial National Leisure Education Conference. At this conference, plans were made for the formulation of a Leisure Education Advancement Project, to develop and field-test a comprehensive leisure education curriculum. The curriculum included skill instruction and counseling in order for the recipients to appreciate the constructive use of discretionary time and to understand the impact that leisure usage will have on the individual and society in general (Lancaster & Odum, 1976).

Project I Can (Wessel, 1976) is a complete adapted physical education curriculum, utilizing a diagnostic-prescriptive approach to instruction. The materials were originally field-tested with mentally retarded children and a leisure skill activity unit has been included in recent years.

A curriculum entitled Teaching the Moderately and Severely Handicapped: Curriculum Objectives, Strategies, and Activities included in one of its three volumes (i.e., Volume II—Communication, Socialization, Safety and Leisure Time Skills), a chapter on leisure education (Bender, Valletutti & Bender, 1976). The authors insist that classroom teachers, parents and recreation professionals have the responsibility for providing leisure time skills to handicapped youngsters. Specific objectives, suggested activities, and an extensive list of references and leisure related materials are provided.

A Systems Model for Developing a Leisure Education Program for Handicapped Children and Youth K-12 (Leisure Information Service, 1976) provided guidelines for integrating leisure education into school programs for moderately retarded persons. A rationale for school-based leisure education and a comprehensive list of resources was additionally offered.

Project SELF, a curriculum entitled Special Education for Leisure Fulfillment (Institute for Career and Leisure Development, 1979), utilized the "Systems Model" discussed above to field-test a leisure education curriculum in four school systems throughout the nation by special educatorsserving the moderate and severely handicapped. The curriculum identified approximately 90 leisure learning units that were divided into eight major activity areas. Each unit contained a description of the activity, instructional strategies, adaptations and a task analysis.

Recreation and leisure education needs of the handicapped were addressed at the 1977 National White House Conference on Handicapped Individuals. Specific implementation plans for leisure education curriculum development, service delivery and dissemination were addressed.

Coyne, et al. (1980) generated examples of leisure skill activities and materials arranged in a developmental format. Developmental levels of play, including exploratory, practice (functional) play, preoperational (symbolic) play, and concrete operations, and a breakdown of ages (e.g., birth to 6 months) within each level was offered.

Wehman and Schleien (1981) developed a comprehensive leisure education curriculum for developmentally disabled persons of all ages to include school-aged children. Over 600 skills were field-tested with moderate to profoundly handicapped children throughout the Greater Richmond, Virginia school system. A discussion of leisure skill assessment techniques, activity selection guidelines, instructional strategies using an applied behavior analysis approach and a leisure skill inventory/checklist depicting the level of trainer assistance required to participate is included. Additionally, over 100 activities were task analyzed from four major category areas, including object manipulation, games, hobbies and sports. The format of the curriculum included the major program elements required in individualized education plans (IEP's), such as program goals, behavioral objectives, verbal cues and materials required for instruction, teaching procedures and special adaptations.

The Ho'onanea Project at the University of Hawaii developed a leisure education curriculum component for severely handicapped persons (Wuerch & Voeltz, 1981). It was field-tested with over 50 severely handicapped students in schools throughout Hawaii. The trainers used systematic instructional strategies to teach leisure activities and skills related to generalization of activities across home, school and community environments. The contribution leisure education could make to community adjustment of severely handicapped persons by developing leisure skill repertoires was emphasized throughout the program.

Strategies used to monitor student progress regarding leisure skill developing are available. In regard to individual short-term objectives, selection of a particular type of continuous or probe data collection strategy will depend on the leisure skill being taught and setting in which instruction is occurring. Freagon, et al (1981) developed a checklist in order to track student progress on skills and long-range leisure education curricular goals established for a comprehensive leisure education program. To ensure the creation of service delivery models that support the provision of instruction on both school and community settings, the authors delineated in their curricular model those settings, an individual currently functions in, as well as those foreseen for the future. They included the areas of school, community, vocational setting and recreation environments.

PART IV

Report on Survey of Administrators and Practitioners Regarding Critical Issues in Recreation and Leisure Education For Special Populations

A panel convened to review the State-of-the-Art document and generate a list of critical issues in recreation and leisure education for the handicapped

Professional educators, therapeutic recreators and administrators in both fields convened for a one-day workshop. The purpose was to review that research and literature discussed in the State-of-the-Art document and generate a list of the critical gaps in the literature survey. Their time was devoted to brainstorming what they perceived to be the important issues and needs in their respective fields.

Because the data was ordinal and could be classified and ranked, the project staff utilized a survey form by which the group rated the issues, needs and gaps identified into major categories. These categories identified the data as critical, important, only relevant or not useful.

List of the issues identified as critical and important for a Delphi Survey of professionals in the field

The project staff compiled a list of those issues identified by the panel as the most critical and also important, which were the first two categories of the panel's survey form. Next, 70 to 100 professors and teachers on the college and university level were selected and asked to respond to these issues in the same manner that the panel responded. This was the first phase of the Delphi technique, the purpose of which was to determine how the leaders in the institutions which provide the majority of the research, and train the professionals to work in the system viewed the issues in relation to their individual academic settings and communities.

Second phase of the Delphi technique with practitioners in the respective fields

One hundred persons were asked to respond to the list of the issues identified as most critical and important by the original panel. A survey form was again used, in asking them to rank these issues according to their particular setting and population of handicapped persons they work with. They were also asked to recommend from the field any policy related issues that seem worthy of funding to the attention of OSE.

The list of important issues and needs concerning therapeutic recreation and leisure education for handicapped individuals was generated through brainstorming sessions of several professional educators, therapeutic recreators and administrators of recreation programs. The Survey of Issues found below is the culmination of a one-day session where 27 issues or gaps in the literature that were considered pertinent to facilitator of leisure education and recreation programs for handicapped persons were identified. The two sets of respondents (i.e., university personnel , practitioners) were only required to rate the issues ranging from "critical" to "not useful to the profession/practitioner at this time."

SURVEY OF ISSUES IN
LEISURE EDUCATION AND RECREATION

Part I: Background Data

Name: _____

Address: _____

Phone Number: (____) _____

Educational Level: ( ) High School
( ) Bachelor's Degree (Major: _____)
( ) Master's Degree (Major: _____)
( ) Doctoral Degree (Major: _____)
( ) Other (Specify: _____)

Current Employment: (Check the one category which best describes your position)
( ) Special Educator
( ) University/College Educator
(Specify level and subject: _____)
( ) Other Educator
(Specify level and subject: _____)
( ) Therapeutic Recreation Specialist
( ) Adapted Physical Educator
( ) Educational Administrator
( ) Program Administrator
( ) Other (Specify: _____)

Indicate your current involvement (if any) with each of the following populations:

a. Mental Retardation	( ) direct	( ) indirect	( ) no involvement
b. Hearing Impairment	( ) direct	( ) indirect	( ) no involvement
c. Visual Handicap	( ) direct	( ) indirect	( ) no involvement
d. Orthopedic Impairment	( ) direct	( ) indirect	( ) no involvement
e. Emotional Disturbance	( ) direct	( ) indirect	( ) no involvement
f. Learning Disabled	( ) direct	( ) indirect	( ) no involvement

Briefly describe the involvement indicated above:

ISSUES IDENTIFIED AS CRITICAL AND IMPORTANT
IN THERAPEUTIC RECREATION

— Delphi Two-Phase Survey —

Purpose: (Initial Phase) to determine how the leaders in the institutions which provide the majority of the research, and train the professionals to work in the system view the issues and needs that have been identified by project staff in relation to their individual academic settings and communities. (Second Phase) Practitioners in fields of therapeutic recreation, special education, and administration will rank issues according to their particular setting and population of handicapped persons they work with.

Part II: Rate the need for data and research in each of the following areas by circling the appropriate number using the scale below:

List of Issues/Gaps in Knowledge Related to Therapeutic Recreation/Leisure Education

	Critical (1)	Important (2)	Only Relevant (3)	Not Useful (4)
1. Development of leisure skill sequences (e.g., community based, table games).	1	2	3	4
2. Development of self-initiated, independent and cooperative free play.	1	2	3	4
3. Play materials and toy preferences.	1	2	3	4
4. Maintenance and generalization of leisure skills.	1	2	3	4
5. Play experiences accelerating other areas of behavior development (e.g., social, language skills).	1	2	3	4
6. Leisure participation and normalization-integrated settings.	1	2	3	4
7. Recreation participation observation systems and response measures.	1	2	3	4
8. Assessment of developmental play levels.	1	2	3	4
9. Use of teaching strategies (modeling, physical prompting) in leisure programming.	1	2	3	4

	Critical (1)	Important (2)	Only Relevant (3)	Not Useful (4)
10. Constructing toys/games and adapting commercially available toys, materials and equipment.	1	2	3	4
11. Parent/home training in leisure education.	1	2	3	4
12. Use of reinforcement techniques (e.g., selection, immediacy schedule of reinforcement) in leisure programming.	1	2	3	4
13. Effects of leisure activity participation upon cognitive, affective, social and motor development.	1	2	3	4
14. Leisure participation as it relates to devleopment of self-image, self-awareness and self-satisfaction.	1	2	3	4
15. Attitudes of community recreation personnel toward handicapped persons in their "normal" community programs.	1	2	3	4
16. Attitudes of leisure service providers toward handicapped persons.	1	2	3	4
17. Attitudes of nonhandicapped peers toward participating with handicapped children in recreational activity.	1	2	3	4
18. Attitudes of handicapped individuals toward leisure.	1	2	3	4
19. Techniques for activity analysis/ task analysis in recreation.	1	2	3	4
20. Selecting appropriate leisure skill activities for instruction.	1	2	3	4
21. Assessing appropriateness of recreational activities.	1	2	3	4
22. Assessing student preferences for recreational activities.	1	2	3	4
23. Evaluation/data collection of recreation programs.	1	2	3	4

	Critical (1)	Important (2)	Only Relevant (3)	Not Useful (4)
24. Design, construction and renovation of physical structures to facilitate leisure participation.	1	2	3	4
25. Medical appliances, prostheses, etc., to facilitate recreation activity participation.	1	2	3	4
26. Legislation and political development influencing recreation programs and practices for the handicapped.	1	2	3	4
27. Development of valid and reliable leisure counseling techniques.	1	2	3	4

The results of the initial phase of the Delphi technique, which attempted to determine how the leaders in the institutions of higher learning viewed the critical issues that were previously identified, are found below:

Educational level: 10% of the respondents held doctoral degrees.
Involvement with the following populations: 90% of the respondents recognized at least indirect involvement through teaching courses and developing curricula with the following special populations: a) mental retardation, c) visual handicap, d) orthopedic impairment, e) emotional disturbance, f) learning disabled. Only 10% of those responding identified b) hearing impaired as a recipient of direct or indirect involvement.

The two issues or gaps in the literature that were mentioned most frequently by the university educators as having the greatest need for data and research included: 13) effects of leisure activity participation upon cognitive, effective, social, and motor development; and, 23) empirical evaluation/data collection of recreation programs. Both issues were identified by 100% of the respondents.

The following is a list of the 27 issues that were identified in the original survey and the percentage of respondents (i.e., university/college educators) who rated the particular statement as a "critical need" for data and research:

Issues/Gaps in Knowledge	% of "Critical" Rating
1. Leisure Skill Sequences	70%
2. Development of self initiated, independent and cooperative play	90%
3. Play materials/toy preferences	70%
4. Maintenance and generalization	80%
5. Behavior development in other areas	90%
6. Normalization/integrated settings	90%
7. Observation systems/response measures	90%
8. Developmental play levels	60%
9. Teaching strategies	90%
10. Adaptations	70%
11. Parent/home training	90%
12. Reinforcement techniques	80%
13. Effects of leisure participation	100%
14. Development of self-image, awareness and satisfaction	90%
15. Attitudes of community recreation personnel	90%
16. Attitudes of leisure service providers	80%
17. Attitudes of nonhandicapped peers	80%
18. Attitudes of handicapped individuals toward leisure	80%
19. Techniques for activity analysis	80%
20. Leisure skill selection	80%
21. Assessing appropriateness of recreational activities	90%

Issues/Gaps in Knowledge		% of "Critical" Rating
22.	Assessing student preferences	60%
23.	Evaluation/data collection of recreation programs	100%
24.	Design/construction/renovation of facilities	80%
25.	Medical appliances/prostheses to facilitate recreation participation	90%
26.	Legislation and political development in recreation	70%
27.	Leisure counseling techniques	60%

The second phase of the Delphi technique included the survey of practitioners in the fields of special education, therapeutic recreation and administration. These individuals responded to the identical list of issues concerning the importance or need for research in the particular areas. The results of the final phase of the survey appear below:

Educational level: 85% of the respondents held bachelor's degrees
10% of the respondents held master's degrees
5% of the respondents held high school diplomas

Involvement with the following populations: 75% of the respondents were currently directly involved with the following special populations: d) orthopedic impairment, e) emotional disturbance; 50% were currently involved with special populations labeled a) mental retardation, f) learning disabled; only 10% of those surveyed were directly involved with: b) hearing impairment and c) visual handicapped populations.

The following is a similar list of the 27 issues that were identified in the survey as issues or gaps in knowledge and the respective percentages of respondents (i.e., practitioners) who rated the statements as "critical" regarding the need for additional research and data:

Issues/Gaps in Knowledge		% of "Critical" Rating
1.	Leisure Skill Sequences	80%
2.	Development of self initiated, independent and cooperative play	90%
3.	Play materials/toy preferences	90%
4.	Maintenance and generalization	70%
5.	Behavior development in other areas	70%
6.	Normalization/integrated settings	80%
7.	Observation systems/response measures	70%
8.	Developmental play levels	70%
9.	Teaching strategies	90%
10.	Adaptations	90%
11.	Parent/home training	80%
12.	Reinforcement techniques	70%
13.	Effects of leisure participation	90%
14.	Development of self-image, awareness and satisfaction	90%

Issues/Gaps in Knowledge		% of "Critical" Rating
15.	Attitudes of community recreation personnel	80%
16.	Attitudes of leisure service providers	90%
17.	Attitudes of nonhandicapped peers	70%
18.	Attitudes of handicapped individuals toward leisure	90%
19.	Techniques for activity analysis	90%
20.	Leisure skill selection	100%
21.	Assessing appropriateness of recreational activities	100%
22.	Assessing student preferences	80%
23.	Evaluation/data collection of recreation programs	80%
24.	Design/construction/renovation of facilities	60%
25.	Medical appliances/prostheses to facilitate recreation participation	80%
26.	Legislation and political development in recreation	60%
27.	Leisure counseling techniques	70%

Unlike the responses of the university educators who unanimously identified 13) the effects of leisure activity participation upon cognitive, effective, social and motor development, and 23) evaluation/data collection of recreation programs as "critical" research needs, the practitioners rated the same issues as "critical" 90% and 80% respectively. However, leisure skill selection for instruction (2) and assessment of appropriate recreational activities were identified 100% of the time as "critical" needs for data and research. Question 24, design, construction and renovation of physical structures and Question 26, legislation and political development influencing recreation programs were identified the least amount of times (i.e., 60%) as the most critical issues and needs.

PART V

Recommendations for Future Research In Recreation and Leisure Education for Special Populations

Convene a "writer's workshop" of experts to provide a critical review of the results of the Delphi two-phase survey and generate recommendations for future research

Five individuals within the fields of special education, leisure, therapeutic recreation and administration convened for purposes of a "writer's workshop." This three-day workshop, attended by professionals as well as practitioners, emphasized both a critical review of the literature to date as well as the generation of recommendations.

The recommendations were classified by the target subject areas of leisure education and recreation for the handicapped, educational assessment, leisure counseling, and interagency coordination. Key policy issues where research results are needed to support policy decisions were highlighted.

Many offer the excuse that the interaction between leisure education/recreation for the handicapped and data based programming is a new one, and as a consequence, the severe paucity of valid research pursuits in the discipline. The field of therapeutic recreation has not benefited from any systematic research efforts, made apparent by the literature reviewed in this report. The purpose of this section is to summarize the gaps in knowledge and point to new programming directions in leisure education.

It has been argued that participation in leisure/recreation activities has a specific impact on the growth, development, education and rehabilitation of disabled persons. As in any area of social or educational research, it is difficult to empirically prove these theories with any degree of accuracy. However, professionals must begin a comprehensive effort to assess and quantify the impact of leisure skill programs in order to verify the importance of this relatively new programming area in the educational arena. In an effort to assist professionals in future leisure research, target subject areas of leisure education and recreation for the handicapped were identified.

Five areas of future research were identified as necessary during the critical review of literature and two-phase survey. The gaps in knowledge or critical issues that were suggested repeatedly included: 1) provisional evaluation of leisure education as part of the special education curriculum, 2) the use of data collection techniques and response measures in leisure education programs, 3) behavior development in other curricula domains resulting from recreation participation, 4) development of self-initiated and independent recreation/play, and 5) instructional strategies related to leisure participation for severely handicapped persons.

1. **Provisional evaluation of leisure education as part of the special education curriculum.**

Since recreation is a related service, including assessment of leisure functioning, therapeutic recreation, recreation programs in schools and communities, and leisure education was included in PL 94-142, the Education for All Handicapped Children Act of 1975, the preparation for

leisure as part of the special education curriculum for handicapped children was identified as an important programming need. According to the federal law, related services such as recreation, and leisure education, should be provided when the child is in need and can benefit from that particular programming discipline. When assessment data indicates such a need, recreation services are provided to assist the special child in school. However, efforts to actually provide and evaluate leisure education programs to school-aged children have been at a minimum and of low priority (Weiss, 1976).

A committee of the National Therapeutic Recreation Society, formulated to study the impact of PL 94-142 on recreation, initiated a national study to determine the involvement of therapeutic recreation and leisure education in state and local education agencies. In 93% of the states responding to the national survey, recreation services were not included in the interpretation of the state plans (Coyne, 1981).

2. Use of data collection techniques and response measures in leisure education programs.

The majority of programs and studies concerning recreation participation and leisure education involved anecdotal reports from participants and programmers. Additionally, program evaluation has relied heavily on frequency counts of participants and assessment of the procedures and input values. We must be more concerned with the measurement of output, that is to say, measurable target behaviors. Criterion for program success must be described prior to implementation of the activity through the use of operational performance objectives. Data collection techniques such as time sampling methods, task analytic and duration assessments could be used to measure the effects and benefits accrued by participating in the leisure skill programs. Additionally, the use of video tape recorders would be advantageous in recording implementation sessions. This would facilitate instructor competencies, objective analysis of participant play behaviors, and interobserver reliability of recorded sessions.

3. Behavior development in other curricula domains resulting from recreation participation.

The development of leisure skills in handicapped children could enhance development in social, cognitive, fine and gross motor skills. Recreational activity as a medium is one of the most effective ways for a child to acquire and develop these skills. In addition to developing cooperative and constructive play among peers, recreational participation is a vehicle by which gross and fine motor skills are developed. Inactivity usually results in poor eye-hand coordination, cardiovascular ordinance, agility, and strength. Since physical development is essential for a healthy body and self-concept, it is critical that handicapped children be given every opportunity to experience play and develop physically.

Constructive play contributes to cognitive development. During play and creative activity, individuals will communicate with each other and learn concepts related to language, arithmetic, and other forms

of learning that foster academic and vocational capabilities. Even for the nonverbal individual, vast amounts of facial and bodily communications are facilitated during play, helping to develop cognitive abilities and broadening the range of knowledge and personal involvement of participants.

There exists a critical need to evaluate client progress in all areas of personal development resulting from recreational participation. It is not sufficient to report only on the numbers that participated in the program or on the enjoyment factor. Several dependent variables must be identified for baseline and post-instructional measurement when developing leisure education programs. Client development and progress must be documented with hard data, demonstrating the functional control of the independent variable, the leisure education program, or the multiple response measures.

4. **Development of self-initiated and independent recreation/play.**

Many leisure skill studies report the development and acquisition of leisure skill repertoires and demonstrate specific self-initiated and independent activity. However, relatively few research reports address or document skill maintenance over a period of time and generalization across skills, persons or places. The "train and hope" technique continues to be the order of the day. Many handicapped children who received instruction in leisure education adequately demonstrated self-initiated free play skills in the presence of the instructor. But the maintenance of the skill does not occur or has not been documented sufficiently in the literature. Research is necessary to determine which leisure activities and instructional strategies are effective in facilitating self-initiated and independent play in a variety of environments following leisure education. Training should include strategies for response maintenance and generalization.

5. **Instructional strategies related to leisure participation for severely handicapped persons.**

It was felt that future research efforts should be directed toward the development of specific techniques to facilitate leisure participation by severely and profoundly handicapped persons. The more physically and cognitively involved the participant is, the greater amount of unobligated time he will have. There exists a paucity of literature concerning leisure education for this population. Professionals can no longer ignore this underserved population and insist that the technology does not exist.

Functional leisure skill curriculum content and community-based recreational programs must be introduced to the severely handicapped to facilitate independent living. Innovative methods must be tried to get severely handicapped individuals involved in constructive and enjoyable activities, including leisure counseling techniques. Leisure activities must be carefully selected, analyzed, and sequenced in many leisure skill areas in order to enhance participation, success, and enjoyment. Adaptations or modifications should be implemented and evaluated and various teaching techniques including prompting, fading, and modeling

could be employed. Increased attention must also be given to the development and evaluation of the function which toys and games could play in facilitating appropriate play responses.